

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

61 57
Volume XXII

6777 7
Number 1

LIBRARY

RECEIVED

SEP 30 1915

U.S. Department of Agriculture

The Agricultural Student



RURAL LIFE NUMBER

SEPTEMBER, 1915

FOREWORD

Gov. Frank B. Willis

THE NEW AGRICULTURE

Carl Vrooman

VOCATIONAL AGRICULTURE

George A. Works

IDEALS IN RURAL LIFE

Paul L. Vogt

FINDING FACTS FOR FARMERS

Charles J. Brand

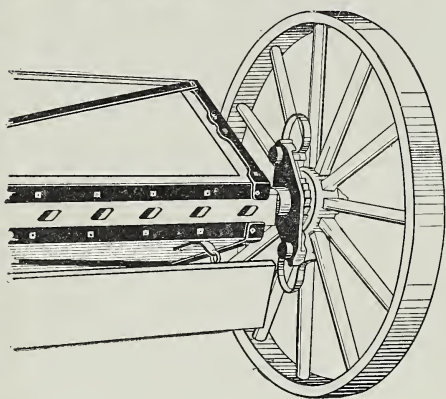
THE RURAL SCHOOLS

A. B. Graham

15c per Copy

\$1.00 per Year

Farmers Be Progressive

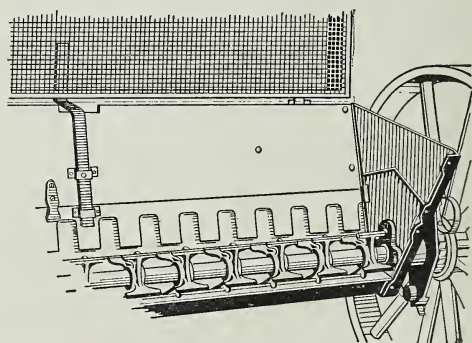


USE

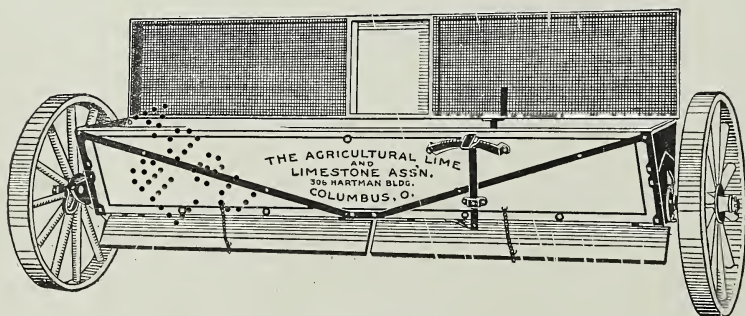
**Agricultural Lime
Hydrated Lime
Ground Limestone**

The Association Lime Sower

Is the Best. It will save you
time and will answer
every need upon
the Farm.



SEE OUR EXHIBIT AT THE FAIR



FOR SALE BY

The Agricultural Lime & Limestone Ass'n

406 Hartman Building, Columbus, Ohio

Protect Your Father and Mother

They doubtless made it possible for you to attend College, why not secure them against loss of money invested in you in event of your death. This is only a business way to look at Life Insurance. Buy a policy which will give your money back if you live, and protect them in event of your death. The premium will be lower if taken now.

The Equitable Life Insurance Co. of Iowa is selling a special protection policy for:

\$7.95 per thousand at age 20.
8.24 per thousand at age 25.
8.65 per thousand at age 30.
9.29 per thousand at age 35.
10.31 per thousand at age 40.

If interested in Life Insurance, inquire about our new policy forms and rates.

Equitable Life Insurance Co. of Iowa

501-2 Marzetti Building, Columbus, Ohio.

JOHN F. STONE, General Agent

RAYMOND C. GOUCH, Student Representative.

JAN 1 9 1917

I Am the Lime Pulver

By HENRY LEE STAPLES.

I AM the LIMEPULVER, conceived by the brain of man, born of mammoth machinery and trained by skillful workmen to be a potent factor for good.

I am powerful. I am tireless, and man has yet to learn the limit of my life. I crush into powder the giant lime rocks that wise old Nature stored in earthly vaults. To me these rocks are brought inert and worthless. From me they go to enrich the soils of nations. I am alchemy come true, for I turn the stones to gold.

Where'er I work prosperity follows in my wake. I make sweet clover blossoms on a myriad fields that once were barren. A million Nitrogen factories and more I erect on every acre, extracting precious plant food from the air and storing it in the soil so that labor may bring forth fruit, and fields stay productive for man and his children's children.

The hum of my hammers clarion that men are deserting the wasteful practices of yesterday for the conservation methods of latter days. I herald a new era in farming.

I live close to Mother Earth, and my friends are the horny-handed farmers. By my work they are paying back the indemnity that profligate methods have levied on our land.

I work for them in the early spring before the fields lie fallow. I mix the magic potion that causes grain to bubble forth in a verdue sea with the first caress of spring, joining ocean to ocean with an endless expanse of green.

Later, because of me, the blades of wheat grow strong, lifting their heads one above the

other, laden with the very substance that builds the bones of man. I keep the soil content. The moisture doth not leave to meet the light, but stays to quench the parched throats of plants when summer suns beat down.

And when the harvest moon glows on a world of gold—not green—the fruits of my labor are around me. Lean soils that have grown fat. Sleek cattle on a thousand hills. Barns filled with heavy grain and the long idle hours of winter holding no fears for him who bade me work.

To Nature's treasure vaults I hold the key. Where'er I go soils that have hoarded their riches give forth their bounty, and to the wasteful soils I teach the simple lesson of saving.

Good roads, too, are my offspring. They follow me. They make my country their country and my people their people, stretching forth like a network of giant arteries where once ox-carts creaked over corduroy roads.

Silos that dot the universe are my children. They store up for wintry days the succulent green feed I grow—the feed that cattle love, once but a treat of summer.

I inspire the farmer, weary of his labor, to look forward to a brighter future for himself and his.

I typify peace, production, progress, prosperity.

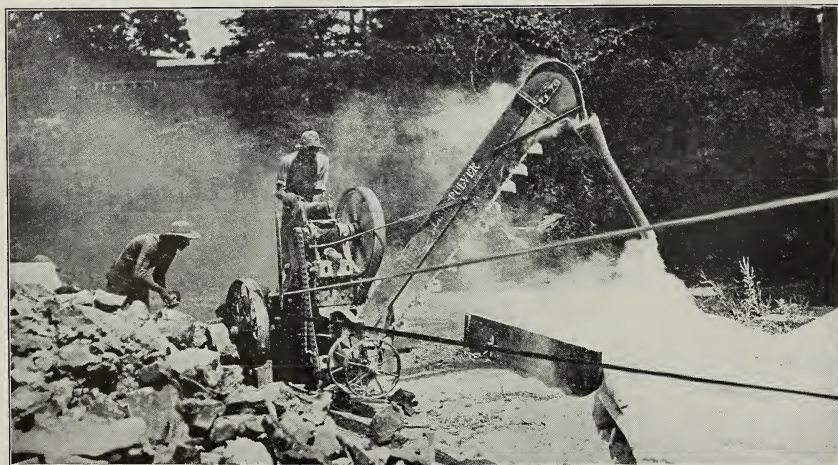
My product is the beginning of all things—the birds of the air, the beasts of the field—even man himself, and the end to which all things return. I am Alpha and Omega.

I am the LIMEPULVER.

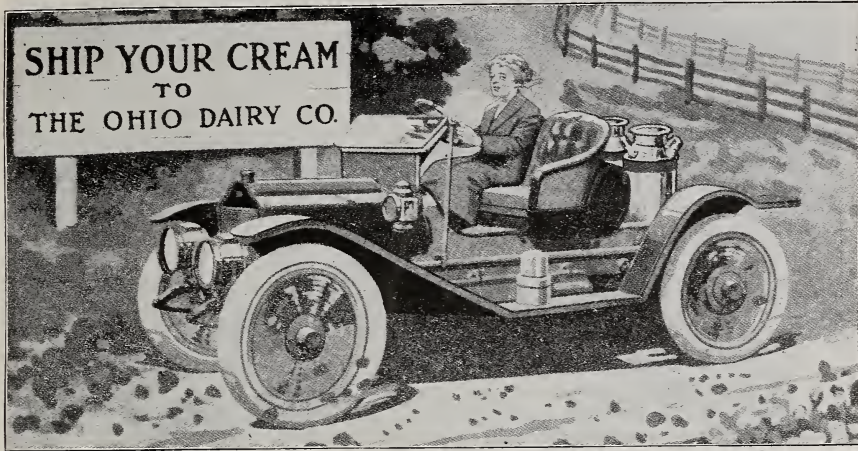
THE JEFFREY MANUFACTURING CO.

7 FIRST AVENUE.

COLUMBUS, OHIO.



Please mention THE AGRICULTURAL STUDENT when writing advertisers.



OHIO FARMERS

Your Trip to the Fair is Not Complete Without a Visit to the
Columbus Home of the

Largest Cash Buyers of Cream in Ohio

We Have Large Plants at

Toledo Columbus Lima

Send to the one nearest your town and order tags and seals. We will also supply you with cans for the first 30 days, free. You get your check, with statement of weight and test of your cream, by return mail. Make your shipments to us.

The Ohio Dairy Co.

LAZELLE AND WALNUT STREETS,
COLUMBUS, OHIO.

The Use Of Hercules Dynamite On Farm, Orchard and Ranch

Prepare this Fall for Spring Tree Planting

YOU can materially increase the strength and yield, and hasten the growth, of trees to be planted in the spring by dynamiting the holes for them this fall.

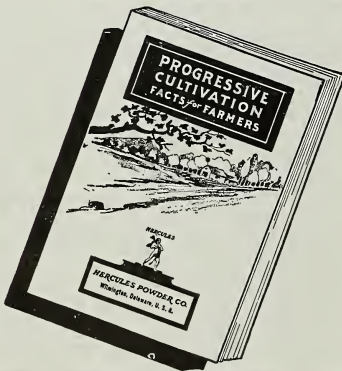
Let the holes lie open during the winter. Then plant the trees at the regular time next year.

You will be surprised at the rapid progress made by trees planted in this manner.

Hercules Dynamite breaks up the soil thoroughly for some distance around the hole. The young tender roots are thus enabled to spread and grow in a natural manner.

When two trees are planted at the same time and in the same orchard, one in a spaded hole, the other in a dynamited hole, the growth and development of the latter is invariably almost twice that of the former. This difference always shows when Hercules Dynamite is used.

If you are not thoroughly familiar with the advantages gained by using dynamite on the farm, write today for "Progressive Cultivation." It contains valuable information on tree planting, subsoiling, stump and rock blasting, drainage work and other agricultural activities.



HERCULES POWDER CO.

Fulton Bldg., Pittsburgh, Pa.

Please send me a free copy of your book, "Progressive Cultivation." I am interested in Dynamite for

Name _____

Address _____

Please mention THE AGRICULTURAL STUDENT when writing advertisers.

Safety First

Have you borrowed money to go to school? Offer some security to those who have been kind enough to loan you money.

Do you place any value on your earning ability? Insure this value.

Is there or will there ever be anyone dependent upon you? Provide protection now, it costs less.

Wise men consider life insurance a necessity, and wise men are taking large policies with the Union Central Life Insurance Company of Cincinnati, the strongest financial institution in the State of Ohio.

LOT H. BROWN, F. N. WINKLER,
Manager. Special Agent

407-8-9 WYANDOTTE BLDG.
COLUMBUS, OHIO

Safety First

AN IDEAL CORN FIELD



This is the reproduction from the actual photograph of a corn field. This land has been under cultivation for 63 years. Note how clear the ground is of weeds. Note size of the stalks and ears. Had not a wind storm on June 24th prevented but three cultivations, the yield of this clean field of 70 bushels to the acre would have been increased. Another cultivation would have been beneficial.

A field like this is not an accident, but is to be expected regularly where the Tower Cultivator is used according to our instructions for adjustment.

We have made this subject a study for years. During this time we have operated in many varieties of soil and have found that our instructions cover all of them. When you see a field on which a TOWER has been used which does not look like this, you can feel confident that the TOWER has not been used according to instructions. It is not the fault of the machine, but neglect by the farmer.

You can produce clean, productive fields like this every time if you follow our printed instructions for adjustment and operation.

The Tower Cultivator

- will do its part.
- does not cut off the corn roots.
- produces a dust mulch.
- cuts all the surface and kills the weeds.
- makes the corn ripen earlier.
- increases the yield per acre.
- conserves the moisture.
- does just what is needed to produce best results in corn culture.
- gives you the means of practicing garden culture in the corn field.

Don't you think the corn crop is of sufficient value to give it the very best method of culture?

Don't forget to follow instructions carefully when you buy a TOWER and "Look for the name TOWER on the tongue."

THE J. D. TOWER & SONS CO.

Sole Makers

MENDOTA, - - - - - ILLINOIS

"Of the Students, By the Students, For the Students"
is the
**Young Men's Christian Association
of Ohio State University**

With an active membership based on membership in an Evangelical church, belief in Christ and support of its work, and with associate membership open to all who believe in the purposes of the association, the Y. M. C. A. exists, in its service, for all students, regardless of nationality or religious belief.

Purposes of the association are, to create religious and more idealism in the lives of the students, to operate activities which build character, and to overthrow, in conjunction with other agencies, certain conditions which exist on the campus and in the city, hurtful to manhood. It is the agent of the church and works for it.

Its work is of three kinds:

(1) For the Other Fellow:

Employment bureau, rooming lists, handbooks, information bureaus, social mixers, visitation and upper-class friendship and aid to new men.

(2) Training for Christian Citizenship:

Industrial and social service, gospel teams and Prohibition are departments making men worthy members of society.

(3) Stones in Character Building:

Bible and Mission study and religious meetings are helps in a man's own development of personality.

We stand for the best and all that is good in the university—we use the biggest, the best men in school—we want to help in discovering the deepest, the truest, the most stable, the satisfying realities of life. We offer our association to all who come.

WHY CO-OPERATION PAYS MOST MONEY FOR CREAM

Because We Pay the Freight and Give the "Tenths"

See the value of the "Tenths" to Geo. Hendren, Morrow, O., who shipped us during July, 1915, as follows:

WITH THE "TENTHS" COUNTED.					SAME WITHOUT "TENTHS" COUNTED.				
		Cream	Test	Fat			Cream	Test	Fat
July 3	.....	36.6	30.2	11.05	July 3	.....	36	30	10.80
July 6	.....	39.8	32.2	12.81	July 6	.....	39	32	12.48
July 9	.....	38.7	32.4	12.53	July 9	.....	38	32	12.16
July 12	.....	40.3	25.4	10.39	July 12	.....	40	25	10.00
July 17	.....	37.7	33.6	12.66	July 17	.....	37	33	12.21
July 19	.....	37.8	25.2	9.52	July 19	.....	37	25	9.25
July 23	.....	37.6	31.2	11.73	July 23	.....	37	31	11.47
July 28	.....	38.8	29.8	11.56	July 28	.....	38	29	11.02
July 31	.....	36.3	28.9	10.49	July 31	.....	36	28	10.08
				102.74					99.47

Mr. Hendren's "Tenths" gained him 3.27 pounds of fat, worth \$0.82.

We paid "Freight" back to him on 9 cans at 15c each, equal to \$1.35.

We sent him a check for \$27.03. \$27.03 divided by 99.47 equals 27.2c. At "Elgin" average price his "Tenths" and "Freight" paid him 27.2c, minus 25.8c equals 1.3 cents above "Elgin."

This is why you get more money from

The West Jefferson Creamery Company

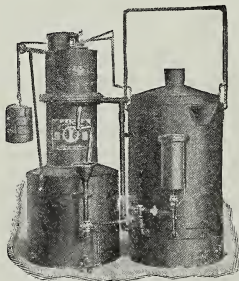
COLUMBUS, OHIO—ZANESVILLE, OHIO.

GAS FOR LIGHTING AND COOKING PILOT LIGHTING PLANTS

SUPPLY A CITY CONVENIENCE TO COUNTRY HOMES

A simple, automatic gas machine, producing the most beautiful light in the world. Cheaper than kerosene. Installed in cellar or outside the house.

**Absolutely Safe
Always Ready**



Handsome ornamental chandeliers.

Barns lighted by pull of a chain—no matches needed.

Clean and cheap for cooking.

**A Cool Kitchen
in Summer.**

Used today in more than 250,00 Country Homes. Pilot Lighting Plants installed complete, ready for use and guaranteed. Write for estimate.

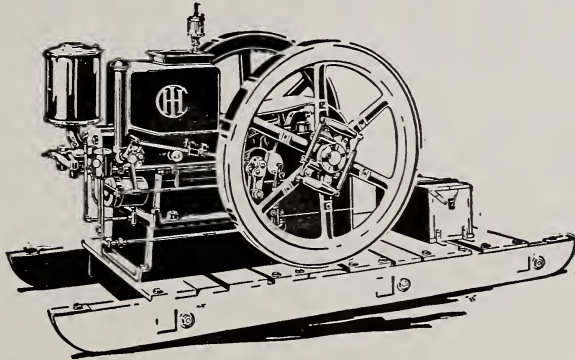
OXWELD ACETYLENE COMPANY

NEWARK, N. J.

CHICAGO.

LOS ANGELES.

International Harvester Oil Engines — Mogul — Titan



THE man who buys an engine without knowing engines, takes a chance. He cannot know whether he has the best engine for his work or not, unless he knows engines and can make comparisons.

Our suggestion would be to take the I H C oil engine—recognized as standard in its construction; study its every feature closely, and use it as a basis of comparison when looking at other engines. That is the only way to choose correctly the best engine for the particular work you want your engine to do.

I H C oil engines—Mogul and Titan—are made in all sizes from 1 to 50-horse power and in every approved style—stationary, skidded, portable, tank and hopper-cooled, vertical and horizontal. They operate on gasoline, kerosene and even lower grade oils, and on gas or alcohol.

When you buy an I H C engine, the engine is not all you get for your money. Our service is worth knowing about. Get acquainted with an I H C engine at the place of business of the nearest dealer where they are sold. Ask him for one of our interesting catalogues or write to us for one.

International Harvester Company of America

(Incorporated)

CHICAGO

USA

Champion Deering McCormick Milwaukee Osborne Plano



OHIO FEEDERS!

Having our own houses at both Chicago and East Buffalo, we are in position to handle, to best possible advantage, your live stock consignments to either market.

Write us what you have to ship
and we will advise you fully

CLAY, ROBINSON & CO.

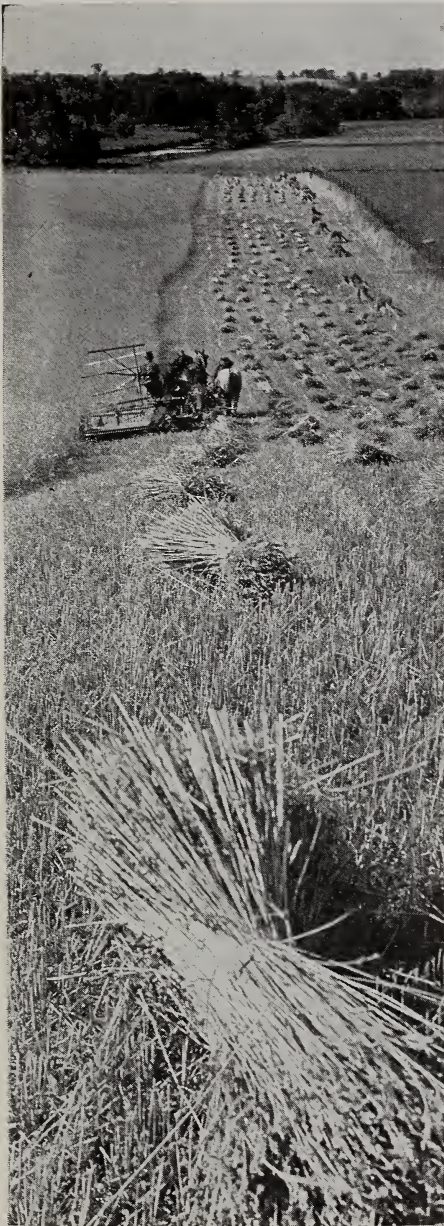
LIVE STOCK COMMISSION

CHICAGO :: EAST BUFFALO
And All the Principal Markets

To
The Rural Leaders
who are shaping the advancement of
country life, who are teaching the
ideals of true American
democracy, and whose prophetic vision
has influenced them to instigate the
principles of progress where the
great natural forces operate--
the country--this volume of
The Agricultural Student
is respectfully dedicated

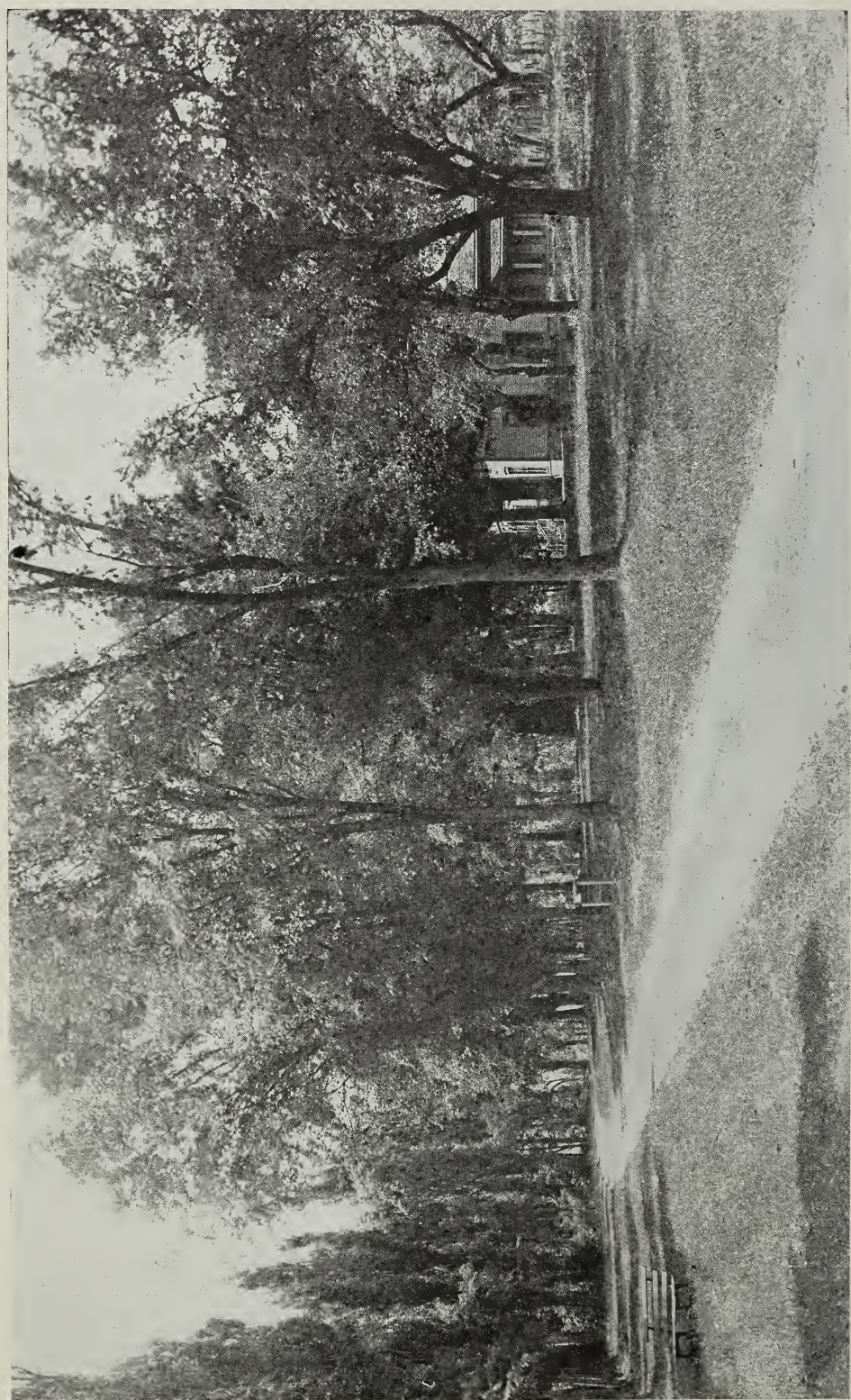






Contents

	Page
FOREWORD—	
Governor Frank B. Willis.....	15
THE NEW AGRICULTURE—	
Carl Vrooman	16
THE RURAL LIFE MOVEMENT—	
Kenyon L. Butterfield.....	17
THE WORK OF AN EXPERI- MENT ASSOCIATION—	
R. A. Moore	20
IDEALS IN RURAL LIFE—	
Paul L. Vogt.....	23
NEIGHBOR ALLEN'S BARN—	
Fred Eastman	28
RURAL YOUNG MEN'S CHRIS- TIAN ASSOCIATION WORK—	
T. B. Lanham.....	33
FINDING FACTS FOR FARM- ERS—	
Charles J. Brand	35
THE GRANGE AT WORK—	
L. J. Taber	39
OHIO FARM WOMEN'S CLUBS—	
Harriet Mason	41
COUNTRY LIFE WEEK AT OHIO STATE	44
EDITORIALS	45
VOCATIONAL AGRICULTURE—	
George A. Works.....	48
AN OPPORTUNITY IN THE RU- RAL SCHOOLS—	
A. B. Graham	53
ALUMNI NOTES	58
CURRENT LITERATURE	60
NEWS NOTES	62



THE AGRICULTURAL STUDENT

Vol. XXII.

OHIO STATE UNIVERSITY, COLUMBUS, SEPTEMBER, 1916

No. 1

FOREWORD

HON. FRANK B. WILLIS, Governor of Ohio

IT is a notable fact that a very large percentage of our prominent educational, business and professional men came from the country.

The drift of population from the rural districts to the city is one of the most important and serious facts in our modern social life. For many years the country youth has been induced to enter the city because of real or supposed advantages in educational and social affairs. The result of this drift of population is that quite a large percentage of our city population is made up of country-reared folk. These people have been instrumental in the formation of our government, the shaping of its laws and the carrying out of real principles of progress.

It is an interesting fact that according to the census of 1880 29 per cent of our people lived in cities; by 1890 this percentage had increased to 36 per cent. According to the census of 1900 40 per cent of our total population resided in cities. By the 1910 census the urban population was shown to be something over 46 per cent of our total population. Undoubtedly at the present time more than 50 per cent of our people live in cities.

This exodus to the city brings with it a condition which must be overcome. The standard of living and of ideals in the country must not be lowered, but on the contrary it must be raised and every effort must be made to provide those features which have made the city attractive, namely: better schools,

better churches, better roads, better market facilities and better systems of co-operation, so that the country can retain its proper proportion of population and still continue to produce its share of the leaders in the educational, business and professional world.

Of course, it is unfair to state that every country boy should remain on the farm because he was raised there. In some instances it is possible that he may find greater opportunity to serve in another calling. Yet it is undoubtedly the fact that many boys who leave the farm and drift into the city could have done better to stay on the farm and apply better methods of scientific agriculture to the old home farm. If

I believe that with the introduction of labor-saving machinery and with better agricultural incentive the country will continue to produce its full proportion of leaders. In order to bring about an increased interest to the boy on the farm there must be presented the possibilities of the Experiment Station, the Agricultural College, the County Agriculturist, and more attention must be given to better schools, better churches, better roads and better methods of co-operation.

When all the agencies for better agriculture are brought into a state of co-operation so that the rural population can easily obtain access to them and Ohio will need have no fear for her future citizenship and for the desirable features that make for educational, moral and religious progress.

THE NEW AGRICULTURE

What the Government Is Doing for the Farmer of Today

CARL VROOMAN, Assistant Secretary United States Department of Agriculture

IT IS more than fifty years since the United States Department of Agriculture was organized, yet I dare aver that the two years just past outweigh the half century that has gone before in progress along the one line that promises most for the farmer, namely, that of agricultural economics.

Think over the high spots in the annals of the Department. In 1839 Congress appropriated \$1,000 for the collection and distribution of seeds by the Commissioner of Patents; in 1862 the Department was created as an independent branch of the government; in the same year Federal land grants of millions of acres of land were made to the State agricultural colleges; in 1887 the experiment stations were established.

So much for the half century past. Its legacy to the American farmer has been agronomy—a vast and valuable, but largely inaccessible mass of information about how to increase our yields. It has given us practically nothing about the equally important art of selling things—about how to make money by the practice of agriculture.

Within these two years just past, however, forces have been set at work which eventually, we believe, will not only liberate to the farmers of the country at large the mass of inert agronomy which has been piling up through the years, but also will make that knowledge available for everyday purposes—for paying off mortgages and building silos and putting in hydro-pneumatic water systems and for otherwise making farm life easier and more enjoyable. To my mind, two things this govern-

ment has done in those two years bid fair to equal in importance all the other things it has done for agriculture in the fifty years past. I mean the passage of the Smith-Lever bill and the creation of the Office of Markets and Rural Organization.

The creation of the Office of Markets and Rural Organization means that we have quit specializing on production and propose to do something toward solving the pressing problems of distribution.

Along this same line comes the cotton futures act, which promises great things for the cotton farmer; the Federal Reserve Bank act, which at least makes a beginning in rural credit legislation; the creation of the rural credits commission looking to further legislation and the organization of the Office of Farm Management as an independent branch of the Department of Agriculture.

Altogether, I believe the work that has been set on foot in the past two years has been revolutionary and that it holds promise of great things for the American farmer of the future. I believe that if we watch our steps and see to it that the New Agriculture is not perverted to the aggrandizement of the few and the degradation of the many, as was the New Industrialism of a century or more ago, we shall shortly see a marvelous change in rural conditions—a change for the better undreamed of by the average farmer, who, through centuries of experience, has hitherto found little ground for hope of getting his just share of the fruit of the soil.

THE RURAL LIFE MOVEMENT

Developing Features Fundamental for the Community Idea

KENYON L. BUTTERFIELD, President Massachusetts College of Agriculture

THE first step in the present rural life movement in the United States was the rise of an appreciation of the improvement of rural **life** as distinguished from rural **work**. Ever since men and women began to confer together about rural interests, there has been plenty of discussion about education, health, morals. When the great

up such a vast field for thought and experiment and work that the state-supported agencies for agricultural advancement have found their hands full in developing this one field. All along there have been voices calling for more attention to the business or exchange side of farming, and the problems of distribution; and other voices have em-



farmer's organizations came into being in the eighth decade of the last century, they emphasized the human side of the rural problem. For witness, recall the old Grange adage, "The farmer is of more consequence than the farm and should be first improved."

Nevertheless the main emphasis for many years past has been placed upon the productive side of agriculture. This emphasis has been accentuated by the agricultural colleges, and by Federal and State departments of agriculture. The rise of agricultural science opened

phasized the need of special attention to the life of the farming people. Only a few years ago men began to see that the human side of the agricultural question is, after all, the side of real significance. There cannot be better farming without better farmers, and there cannot be better farmers without better education, better men. In other words, education, health, morals are not only good in themselves and in building the right sort of community, as well as in contributing to the welfare of the state and nation, but they are directly con-

ductive to productive power, and hence are the most practical things in farming.

When we recognized that the human side of farming was the most important side, we soon discovered that there was, after all, but one rural problem, that we could not have better farming unless we had better farmers; and conversely, that it was pretty hard to have better farmers without better farming. We found that merely to produce more crops did not solve the farm problem unless the farmer could get a better reward for his extra production. We found that neither the poverty-stricken farming regions nor the very rich and prosperous farming regions were necessarily giving the best results in farm life. So we have learned that all of these different elements in rural advancement are interwoven and that the advancement of the rural people along all lines is the most important thing.

The rural life movement began then with a recognition of the deep significance of the human or farm life phase of rural advancement, and that is still perhaps its most distinctive feature. It may be well to mention some special aspects of this feature.

1. The revival of the religious interest. The rise of the county Y. M. C. A. and the Y. W. C. A.; the revival of the country church; the new emphasis upon the rural Sunday school; the recognition of a rural Christian Endeavor movement, are all instances that come quickly to mind. Today careful consideration is being given to the most statesmanlike plans for the rehabilitation of the religious motive in rural life. The agencies named are those that are recognized as furnishing the best machinery by which this

religious motive may do its work. The chief significance of this phase of rural life movement lies in the fact that it recognizes the power of ideals in really moving men to achievement.

2. There is a new recognition of the meaning of better forms of recreation in rural life, for both old and young, and also the fact that, to some degree, at least, this recreation must be organized on some sensible and acceptable basis. The place of play in life is seen to be of real importance. Play as an educator, play as a moral asset, play as a preparation for work, play as a means of developing friendliness and brotherhood are all recent revelations, and it would seem that they are as valuable to the country as to the city.

3. I have already suggested that health is an asset in production; it is also an asset in community life. The traditional notion that the farmer, because of his exercise and open-air life, is not in need of the care of health experts has been exploded. We have discovered that the public health demands the prevention of disease in the country as well as in the city, and for the most efficient worker there should be developed a science of feeding the worker. It is as important as the science of feeding the animal that is to be sold for meat or kept for the production of milk.

4. Slowly, but surely, the rural life movement is emphasizing the value of beauty as an asset in the country. Rural art in the home, about the grounds, on the roadsides, around school houses, and in the better layout of the farming community is gradually taking a recognized place as something to be attained. Rural art is coming to its own.

5. And more than all this, we are

recognizing the need of a thorough-going system of rural education—rural education in the sense of a good general education for the farm-bred boys and girls, and rural education as inclusive of specific agricultural education; that is, education for the farm and farm life.

To my mind these are the main features of the rural life movement as it is now developing. The inclusive idea, however, is that all of these things must be brought into a unity, and this unity is the development of an adequate neighborhood life. The community-idea

is gradually permeating our rural people. And what is the community-idea? Why, simply that the farm families who live in such relation to one another that they form a natural group, must utilize this natural contiguity for spiritual ends. That is to say, they must become a real unit, a sort of family of families. They must buy together, sell together, be sociable together, act together in all sorts of ways for the common good. This is not only the crowning notion in our rural life movement, but the fundamental process of country life advancement.



RURAL ART.

THE WORK OF AN EXPERIMENT ASSOCIATION

How an Entire State Is Benefited by a Grain Growing Plan

R. A. MOORE, Secretary The Wisconsin Agricultural Experiment Station

REALIZING the need of an organized body to grow and disseminate in large quantities high yielding pure bred seed grains, the foundation stock of which had been bred by the agronomy department of the college of agriculture, the organization of the Wisconsin Experiment Association was effected February 22, 1901. For several years previous some experimental extension work had been carried on through the medium of the short course alumni, but a larger and more thoroughly organized force was needed that would be commensurate with the great work to be undertaken.

At the organization the Experiment Association started out with 187 charter members; now we probably have a working membership of 2,000. A person must have been a student in the college of agriculture in order to be eligible to the Experiment Association. We do not take in the rank and file of farmers, as we feel that it is necessary to have young men who have received instruction along the line of best methods for the growing, curing and shipping of all seed grains.

The Experiment Association receives state aid, and while it co-operates closely with the college of agriculture, yet it is no integral part of the college, only as a co-operative body. For two years the cost of experimentation and getting out the first annual report was borne by the members of the Association, but the legislature of 1903 passed an act by which the state appropriated \$1000 per year and paid for publishing the annual report. In 1905 the appropriation was raised to \$2000, in 1911 to

\$3000, and in 1913 to \$5000. The state funds are used for purchasing pedigreed grains and for material and help for actually carrying on the work.

We have arranged with the experiment station so that all pure bred seeds which are grown on the station farm can be purchased and controlled by the Experiment Association. These seed grains are sold to the association at the regular market price of common grains. In turn, the Experiment Association agrees to establish seed grain centers and sell at a moderate figure to farmers and seedsmen of the state the pure bred pedigreed seed grains. Under no condition is a member of the association allowed to charge more than twice the regular price of common grains for the select seed grain. For instance, if oats were worth 50 cents a bushel on the general market, a member could not charge more than \$1.00 per bushel for his select oats, etc.

As soon as pure bred corn was grown at the station farm in large quantities, sufficient seed was put into the hands of each member of the association to plant two acres, and he was requested to establish a pure bred corn center where neighboring farmers and others could see and secure the high yielding seed in the future. The member agrees also to test the pure bred corn in comparison with the best strains of corn he knows in the neighborhood and report the facts to the Secretary of the Association. In this manner from ten to fifteen hundred corn centers were established and the pure bred varieties of corn were grown and cured for seed in large quantities. Neighbors, seeing

the fields from time to time and learning of the high yields, soon discarded their common strains and secured the pure bred varieties. By this method of dissemination, whole communities started the growing of pure bred corn, and the beneficial influence of the seed corn center was felt far and near.

in different parts of the state showed an average yield for five years of $36\frac{1}{2}$ bushels per acre, $5\frac{1}{2}$ bushels above that of the best varieties compared with it.

On account of the large membership of the Association, over 1500, scattered throughout the state, it was deemed



COUNTY ORDER DISPLAY AT WISCONSIN STATE FAIR.

A test with the Silver King (Wisconsin No. 7) corn, running through five years, in which 1500 members took part, resulted in the No. 7 corn giving an average yield of 61 bushels of shelled corn to the acre, 12 bushels more than the best corn compared with it.

Reports from 1020 members of the Experiment Association who were carrying on tests with Oderbrucker barley

advisable to organize local associations in those counties that had fifty or more regular members. Forty-four counties are now organized. These organizations are known as County Orders of the Experiment Association and are officered similar to that of the state association.

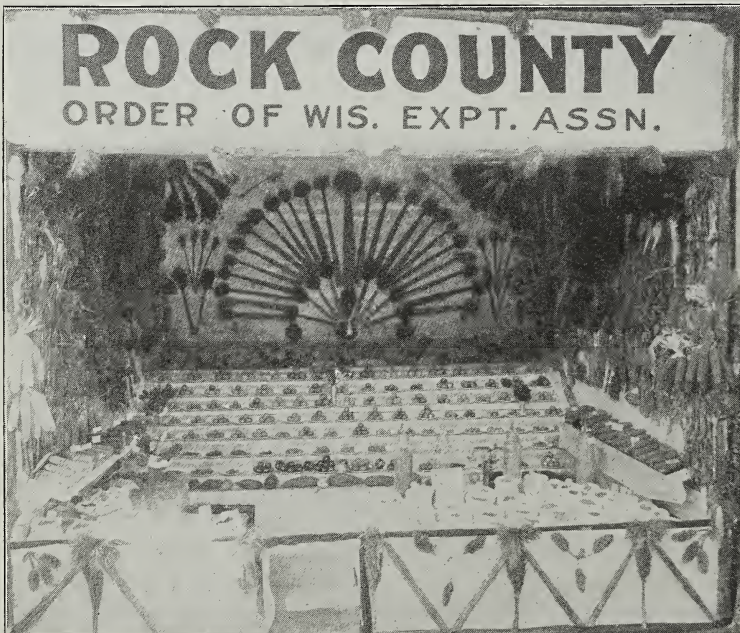
A farm and seed inspector is appointed by the state association, who

receives his pay from the association for his services. His duty is to visit all farms upon which pure bred seed grains are grown. The pure bred seeds that pass inspection, together with the name and address of the grower, is listed. No grain except that which comes up to a required standard is listed. All members having grains passing inspection are allowed to use special association tags for the shipment of such grains. This practically puts the association back of the shipment and makes the association morally bound for the purity and quality of the seed. The tag is conveniently arranged so that the necessary facts required by the state inspection law can be conveniently entered.

The various County Orders of the association hold at least one regular annual meeting, and such special meetings from time to time as the work

in hand demands. The Orders assist in making their respective county fairs of a more educational character, and they also take an active part in state and national competitive displays of grains and forage plants. The secretary of each County Order keeps in close touch with his members and directs them, as far as possible, in the line of effort that will be for their general interest. Leaflets listing pure bred grains and stock are published from time to time, which aids materially in finding a market for different products found on the farm.

By the methods above mentioned the Wisconsin pure bred seed grains have become known over the entire world, and the revenue now coming to our state from the sale of these select grains gladdens the hearts of the seed growers and helps to solve the question of how to keep the boy upon the farm.



PRIZE EXHIBIT AT A NATIONAL CORN SHOW.

IDEALS IN RURAL LIFE

Features of Farm Life That Stimulate True American Democracy

PAUL L. VOGT, Professor of Rural Economics Ohio State University

When, in the summer of 1908, President Roosevelt appointed a commission to make a study of rural life in the United States, the country at large looked upon the appointment as simply one more step on the part of an astute politician to attach another part of our voting population to the ranks of a successful political party. It had been assumed for generations that the open country was the ideal place to live; that the great problems in social life were to be found in the congested conditions incident upon the unprecedented growth of the large cities; and that if only the ideal conditions in the country could be retained in the city, the welfare and progress of the nation would be assured.

Since that time the interest in the problems of the country has been growing at an accelerated speed. Rising costs of living in the towns; lessening productivity of the soils in once prosperous sections; abandoned farm lands even in the great central valley; and a lessening of agricultural exports all indicate that both urban and rural population is vitally interested in the country problem. This interest has found expression in the marked increase in attendance at our agricultural colleges; in the extended investigations that have been made of rural credit and rural co-operation in foreign countries; in the studies of rural life by both public and private agencies; in the rapidly increasing appropriations by governmental agencies for study and leadership in rural organization and in rural education; and in the awakening sense of responsibility in

helping to deal successfully with the rural problem by the leaders of the rural church. Already a well organized effort is being made to bring to rural life that better adjustment which the safety and welfare of all classes of the body politic demands.

One of the first errors in rural thought that must be cleared away is the assumption that if the economic welfare of the community is cared for, social welfare will take care of itself. If wealth increase were a solution, then we should find the greatest satisfaction with rural life in the wealthiest agricultural sections. Yet in those parts of the country where land values are the highest, we find the greatest exodus of farm families to the villages and the cities. Farm boys and girls whose parents are able to give them high school and college training are not planning to return to the country. The boys are looking forward to business or the professions and the girls toward urban homes. In popular speech, any movement toward the farm is spoken of as "Back to the farm," instead of "Forward to the farm." This attitude is to be found in the best, as well as the poorest, sections, and it indicates that before rural life will have the place in popular estimation that it deserves, it will be necessary either to create an appreciation for the advantages now enjoyed or to bring to the country those advantages which are lacking as compared with the city.

Country life will continue for a long time to come to have some unpleasant features. There is no immediate prospect of relief from the necessity, in the

diversified farming section of the central valley, of getting up before daylight on cold winter mornings and going out by artificial light to feed the stock, do the milking, clean out stables, curry the horses and do the thousand and one little things that require muscular effort and exposure to the weather. The farmer must expect to have mud on his boots, the odor of the stable on his working clothes. Manure must be hauled out, heavy timbers must be handled, hands will be bruised and cut and calloused and hardened by exposure to wet and cold. In the summer time long hours must be put in by the good husbandman to harvest the crop when the weather is good. From Monday morning, when, with muscles still sore from the work of the past week, till Saturday night, when again the brief respite from struggle comes, the farmer must will himself out of his couch and force himself to stick to the tasks, forgetful of the fact that he is tired, because upon steady, persistent effort depends his success. These things will continue as unavoidable accompaniments of farm life. We will never have a safe farm life until every farmer will accept the unpleasant features of the work as his own, to be mitigated as far as possible, but to be taken as a part of the life of the farm.

But the farmer and the townsman, too, must remember that other occupations have their unpleasant features. Including all the hard work that goes with farm life, it cannot equal in its severity the long hours that are put in by the professional man in town, the teacher who works not only in the classroom, but who spends long hours in the evenings preparing his lessons or looking over the work done by the pupils; the lawyer who, in a trying case, knows no eight hour system of

labor, but sometimes puts in eighteen hours a day preparing his argument or getting at the facts of the contention; the doctor, who is called out at all hours of the day or night in his service to the community; the business man, who must meet the competition of his fellows and who is in constant dread of ultimate failure in his business; or the workingman, with a family to support, with a small wage and no home of his own, constantly subject to the will of an employer, who may cut him off at any time without previous notice and set him walking the streets begging for a chance to earn an honest living. The disadvantages or unpleasant features of the farm appear big to the one on the farm because he does not realize the struggle for existence in the town.

The country must continue to stand as it has stood in the past, for the higher values in life as contrasted with the materialism of the city. When the pioneers carved out homes in the Ohio Valley or broke up the prairie lands of Illinois they were not thinking of making large fortunes. They were homemakers. They loved the country and the family life on the farm. They valued people for their personal characteristics and not for their bank accounts or their social position. When the country man ceases to stand for these ideals and tries to compete in the struggle for wealth with the urban resident he is deserting those ideals which have made the country worth while and has entered upon a struggle which can only bring disappointment.

The farm business will continue to be an essentially small scale industry, yielding a comfortable and relatively sure income, but never holding promise of enormous wealth accumulation. In Ohio, in 1910, the average number of acres per farm was 88.6, and the aver-

age improved acreage was 70.7. The largest average acreage was in Madison, Pickaway and Ross Counties, with averages of 156.3, 134, 6 and 125.6, respectively. The average value of all property per farm was \$6984, while the average capital of the 15,138 manufacturing plants in Ohio was \$85,920. The value of goods added by manufacture per plant was \$40,542, while the value of products per farm was but \$1397. When it is remembered that the \$1390 income for the average farm must pay

whistle or the time clock. The work is mechanical; the worker is not his own boss, but lives on sufferance of some one else. He has to live in houses built by others, pay rent sometimes beyond his means, eat food deteriorated by tedious marketing processes, live in sections crowded, dark, dirty, a slave to circumstances. The farmer who owns or rents is lord of all he surveys. This, to the free born American citizen, is a thing that is worth more than all else that life has to give, and the rum-



“THE FARMER IS LORD OF ALL HE SURVEYS.”

interest on investment of \$6900, taxes, insurance, maintenance and all other expenses, the conclusion is evident that the farm does not offer opportunity for large material advancement.

The farm community, then, which is seeking the good life, must not expect satisfaction if hope is placed in large bank accounts. The great compensating advantage, however, lies in the satisfaction the farm gives to the desire for independence, so deeply imbedded in the heart of every true American. The great mass of urban population is governed by the blow of the

blings of discontent in the cities, the rise of socialism, the strikes and labor wars are all evidences of the struggle of the masses in the city to regain that which they have lost, and which the farmer has, but in many cases does not appreciate. So far as material comforts are concerned, the farmer may have a definite advantage of the townsman. Under modern conditions, with modern means of communication and transportation, farm life may be made the most desirable of the entire social system. The farmer can have good heating, lighting, plumbing, power at reason-

able cost. He can get to the village or the city trading points almost as quickly as his urban neighbors. He has, or may have, what the town man wants, a good, large yard, trees, garden, everything that heart could wish, at a cost far below what it costs in the city.

What should the farmer's ideal be as to education? Shall he assume that the country cannot have good schools and that if his children want a high school education he must move to town to give them this advantage? The time has come when this heresy in the rural mind must be done away with. We must stand firmly for the principle that country boys and girls have a right to a secondary education, provided conveniently to their own homes, as much as have the village or city boys and girls. Moreover, the time may come when, instead of country children going to school in town, we shall find town children seeking the privilege of attending the country schools. The country school can have the advantage of plenty of play space, good air and light, contact with nature and the simpler, more natural environment. Today the town schools draw the country people because the country schools have been neglected. Farmers have too long assumed that the good schools must be in the towns; when loyalty to rural life as such is developed, then nothing will be too good for the country, and in every respect, except, perhaps, in the enormous buildings, the country school may become the equal, if not the superior, of the town school.

But can the country ever compete with the town in the lighter side of life, the amusement and recreation side? The country probably will never have such amusements as the hippodrome, the metropolitan opera, the

symphony orchestras, or the great art centers. Yet modern transportation facilities place these at the disposal of country people as conveniently as for the city people. The country will not have the great theaters or the great assemblages to hear men of national or international influence. But what can it have? It can have the close friendships; the joys of human association based on long and tried acquaintance. It can have the pleasure of companionship free from the selfish implications covering many urban associations. It can offer time to live, time to think, and talk, to get away from the mad competition of urban life. Real living, as contrasted with making a living, is possible in the country. When the rural community becomes conscious of itself; when it sets out to become self-sustaining instead of being an indifferent, despised attachment to some neighboring city; when it seeks out, organizes and develops its own talent, it will not be necessary to go to New York to get music, art, dramatics, forensic ability, or literary talent. The rural community, with its orchestra, its painters, writers, students, philosophers and farm workers will be a society unto itself.

When co-operative banks, stores, telephones, marketing organizations are established, then the village resident will be the servant of the farming group. The ideal of independence, good home, good family life, plenty of yard space with abundance of fresh air and sunlight must have precedence over the ideals arising out of the scramble for the dollar. Instead of accepting city standards in education, recreation and social life, the farmer must seek out those things that are adapted to the country and cling to them as truly worth while. Let him insist on

having his share of public benefits out of the public funds; on just taxation, economy and yet efficiency in government; and a normal life, and the com-

munity will continue to be as the mainstay of American civilization and the hope of American democracy.



Here in the country's heart
Where the grass is green,
Life is the same sweet life
As it e'er hath been.

Trust in a God still lives,
And the bell of morn
Floats with a thought of God
O'er the rising corn.

God comes down in the rain,
And the crop grows tall;
This is the country faith
And the best of all.

NEIGHBOR ALLEN'S BARN

How a Rural Village Built a Community Association House

FRED EASTMAN, Locust Valley, New York

LOCUST VALLEY is a small unincorporated village about 31 miles from New York, on the north shore of Long Island, with a population of 1010. The community about Locust Valley is not a compact group, but scattered over about 25 square miles of territory. I will begin with the status of affairs when I came into the town three years ago as secretary of a Neighborhood Association and pastor of a small church of 22 members.

I had been in Locust Valley only a few weeks when one of the young men came to me, asking if a boys' club could not be organized. "For," he said, "the young people have no place to go except the poolrooms operated in connection with saloons." I made a brief survey of the community and found that he had stated the situation rightly, for we had seven saloons—all busy. The old forms of recreation in the homes had disappeared with the passing of the settled population. For clean recreations the young folks had to go to neighboring towns. However, there was one organization left, the Firling Athletic Club, which had a membership of 15 young men. They were meeting in an abandoned shoe-maker's shop, 8 by 10 feet. They were good fellows, but their number was small, their organization was weak and rather clannish, and their equipment consisted of only two or three old chairs, a broken table and a few dishes.

A Religious Meeting.

I asked the young man who suggested forming the boys' club to help me by sending out post cards to all the young men in town over 16 years of

age, calling a mass meeting for the following Friday evening. Meanwhile it seemed that the Firling Athletic club was the logical place to begin operations, so I got myself invited to two or three of their meetings, played cards with them, swapped yarns and did my best to make friends with the boys. The third or fourth night I told them of the proposition for clean recreations in our town. I proposed that we take the job on our own shoulders and that we carry it out by the following method: (1) that we would petition the Neighborhood Association to take us all in as active members on payment of our regular dues of one dollar per year; (2) that we would petition the Neighborhood Association to commission us as a Recreation Department to furnish our town with clean recreations, not only for ourselves, but for our fathers and mothers and younger brothers and sisters; (3) that if successful at the end of a year and a half or two years, the Association build a Neighborhood House that should be the social center of our town, housing a motion picture show, bowling alleys, pool, fire department, etc.

We talked over that proposition for two hours. I think it was one of the most religious meetings I ever attended. The air was blue with smoke, the table was covered with cards, the fellows lounged around in all sorts of easy positions. But there were fifteen young men seriously considering taking a larger purpose in life, the unselfish purpose of furnishing our town with clean recreations. The boys were unable to decide that night, but they all agreed

to come to the mass meeting on the following evening.

The Opposition.

The mass meeting was held in the little house where the volunteer fire truck was kept. Forty fellows were present, ranging from 16 to 35 years of age. I laid before them my proposition, and of the opposition they would meet. It is the same opposition that any forward movement meets anywhere—the opposition partly of the saloons.

but this proposition over or we'll bury it. Good night." Everybody yelled. "Good night!" The following week the plan to organize this department was the talk of the town. The Firling Athletic Club had several meetings and decided to come in with us.

On the following Sunday we devoted our church service to the consideration of clean recreations for Locust Valley. That afternoon the directors of the Neighborhood Association met and



THE NEIGHBORHOOD HOUSE

but mostly of the good Christian people who stand around with their hands in their pockets and say, "This thing can't be done. Wonderful things might be done in some other town, but not in this place. This is the most peculiar town on God's earth."

I tried to get a discussion on the proposition, but I couldn't get anybody to say a word. Some of the fellows were suspicious and some were just bashful. Finally I said, "Well, fellows, think about this thing for one week. We'll meet here again next Friday night, and then we'll either

passed the petition and granted the fellows \$50. They also appointed an executive committee, made up of two directors and five other local men, a lumber dealer, a mason, two carpenters and a farmer.

Organizing and Equipping.

The executive committee appointed a temporary quarters committee, an athletic committee and an entertainment committee. The temporary quarters committee secured neighbor Allen's barn for a club room. It was just an old red bank barn, a field behind it and a road and swamp in front

of it. After they had secured this barn they set about to equip it. They made a list of all the things which could be used in a club room for young men. They sent a copy of this list to every family in the village, stating that they were not asking for charity, but if anyone had any of these articles in the attic and would like to get rid of them, we could make good use of them. When the responses to that call were in we found we had on hand a stove, chandeliers, graphophone, dishes, chimney, indoor baseball set, \$150 pool table, pocket stops for same, five leather chairs, whitening for walls, 12 card decks, piano, pianola, boxing gloves, reading lamp, window shades, 3½ dozen glasses, 24 chairs, 1 oil stove, 15 yards cocoa matting, 5 folding chairs, cash \$137.87 and subscriptions to half a dozen magazines. The Firling Athletic Club turned over its entire equipment of 9 chairs, 2 tables, 20 cups, a coffee boiler, an iron pail and its entire treasury of \$42.87.

The athletic committee got busy and organized two troops of Boy Scouts. One flourished, although it is now under another name. The athletic committee also organized a baseball team, which was successful the first season, was licked about half the time the second season, and was utterly vanquished the last season. The entertainment committee set out to provide a dance, euchre, or supper about once a month. These were open not only to members, but to the entire community, and often we had as many as a hundred people on the night of the dance or euchre.

Eighteen Months' Experience.

For a year and a half we worked in Allen's barn. It became the social center of our town. I do not mean to say that everything was smooth sailing.

We had trouble with the saloons and some of their friends who tried to introduce liquor, and succeeded two or three times, nearly breaking up the club. We had financial troubles. But, looking back at the end of a year and a half, we found that we had pulled together pretty well after all. Our membership had increased from 50 to 148. So we started our campaign for a large neighborhood building.

The Neighborhood House.

It cost us \$31,000, and almost every family in town that was a permanent resident subscribed toward its construction. Some gave money, some labor, and some advice. We didn't build it by contract. After the plans and specifications were made, we got all the carpenters together into a carpentry committee, the masons into a masonry committee, the plumbers into a plumbing committee, etc. Each committee took charge of its department under the supervision of a local manager, who volunteered his time. Each committee took pride in doing its work well as a lasting advertisement to the building trades of our town. Practically every man who worked upon the building gave a part of his time. More than \$1000 in volunteer labor was built into the foundation and hammered into the walls.

We finished the building a year ago last July. At the grand march on the opening night 400 people, rich and poor, employers and employes, danced together and enjoyed an evening of truer democracy than anything we had yet seen. For fourteen months we have run the building on a self-supporting basis. We have not had to pass the hat once for support, and our expenses are about \$350 a month. We raise this by our monthly dues, bowling alleys, motion picture show, pool table and

entertainments. Our attendance has averaged about 700 a week. Here is a typical week's program at the building:

Monday, 8:15 p. m.—Rehearsal, mock trial.

Tuesday, 4 p. m.—Boys' Club.

Wednesday, 3:30 p. m.—Younger Boys' Club party; 8 p. m., Mock Trial, admission 10 and 15 cents.

Thursday, 3 p. m.—Women's Bowling Club; 8 p. m., Choral Society at Friends' Academy.

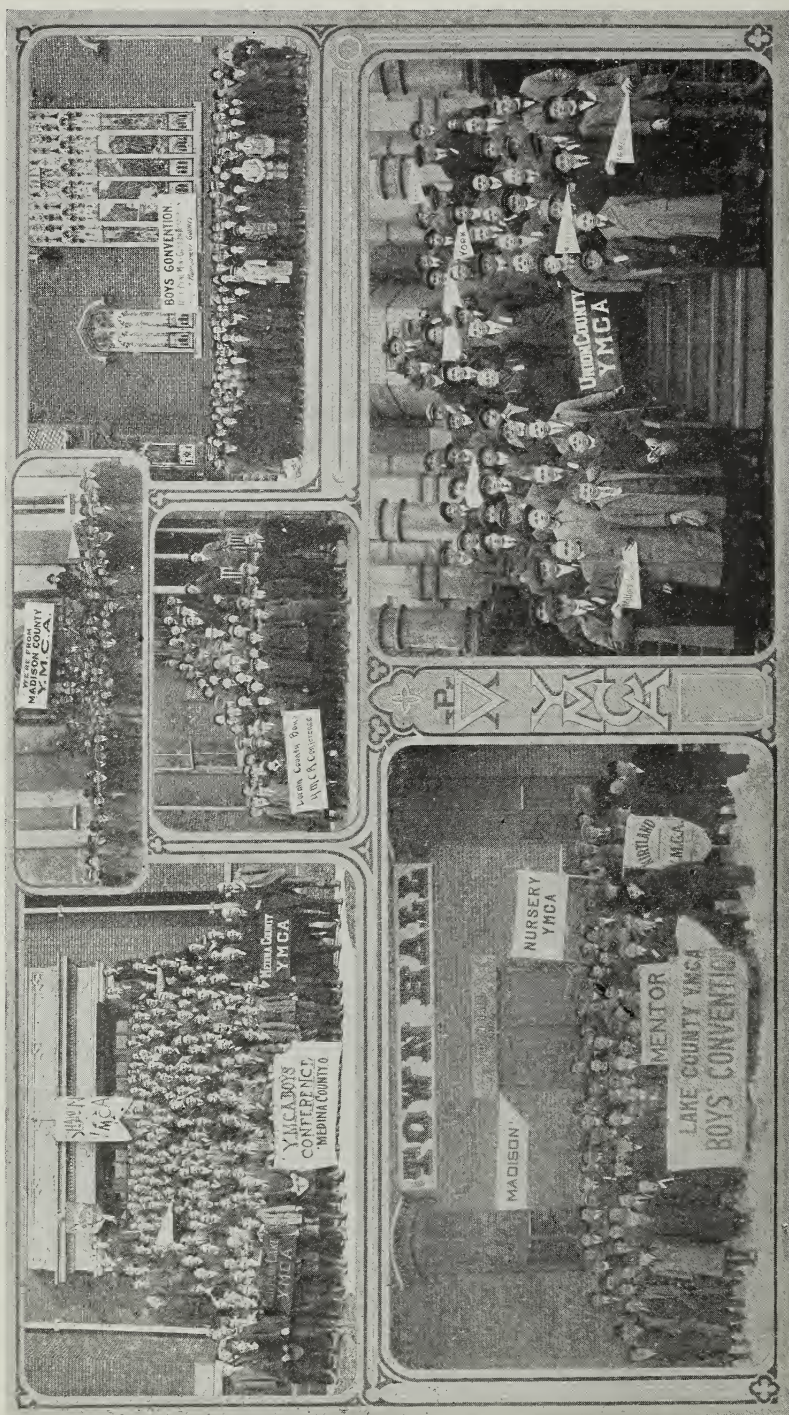
Saturday, 8 p. m.—Motion pictures, 10 and 15 cents.

We are trying in many other ways to get the rich and poor to work together, capital and labor to understand each other better, to make them not only admit that they are brothers, but to act like it. They used to say that our town was called Locust Valley because there were so many low cusses there. We still have the low cusses, and they grumble and complain. But we don't think much of them any more. Above the grumbling we are beginning to hear the voices of men and women and children who are proud of their community and their neighbors.



We believe in large crops which leave the land better than they found it—making the farmer and the farm both glad at once.

—Henry Ward Beecher.



OHIO'S GREAT COUNTRY BOY DEMONSTRATION.

Over Eight Hundred Picked Boys From Rural and Village Communities Attended Six County Boys' Conferences in 1915.

RURAL YOUNG MEN'S CHRISTIAN ASSOCIATION WORK

How Six Counties in Ohio Offer Rural Opportunities to Young Men

T. B. LANHAM, State Secretary, Columbus, Ohio

THE work of the Rural Young Men's Christian Association was first began in Medina County in 1907. Even at that time few people thought that such work was practicable, but it has been demonstrated that such work is popular in our small towns and rural communities. There are now six organized counties in this state: Medina, Lake, Lorain, Union, Montgomery and Madison.

Each of these counties has a committee composed of the leading business and professional men; also a trained county secretary, who gives all of his time in the organizing and developing of local groups throughout the counties. Fifty-nine villages and rural communities now have organized groups, with a membership of over 2000 young men and boys.

One hundred and seventeen volunteer leaders are serving in their respective local organizations. These men—many of them are college graduates—have been discovered and enlisted by the county secretaries. There are now more than 1500 boys who meet weekly in these counties for the physical, educational, social and religious development of their lives.

Perhaps one wonders what there needs to be done along these lines with the splendid schools, churches and other agencies that help. In our work we are endeavoring to supplement; for instance, in our educational work, trips are made through which boys become better acquainted with their own county and surrounding cities. Through this organized work a large number of boys

have visited cities, colleges and other places of interest for the first time.

Practical talks given by business and professional men have not only been interesting, but most helpful. Doctors talking to these boys in regard to health, hygiene, diseases and their effects, have opened the eyes of many boys to facts of which they were heretofore ignorant.

Through deputation teams from colleges visiting small towns and rural communities, by actual statistics, a larger number of our young men from these organized counties in the last few years have entered college than ever in the history of the counties. The promotion of various kinds of agricultural contests and stock judging work has enlisted new interest in the country among a large number of boys.

The play life is lacking in the country, and through our work hundreds of boys participate every year in our track and athletic meets, besides co-operating with our schools in enlisting large numbers in this work. We are promoting a scheme along this line that does not take the star into consideration, but the getting of every boy into the game.

A large number of play days have been held, in which the county secretaries have been able to set up, with the teachers, programs which have attracted an entire township.

Summer camps, with strong leadership, have brought together from all parts of the county, large numbers of boys who have become acquainted for the first time. Friendships have been

formed that will help in the developing of the best interests of the county.

Through the social work, many young people have been brought together under helpful and delightful influences. Fathers' and sons' banquets, mothers' and sons' banquets, the boys entertaining their mothers, entertaining their sisters, coasting parties, properly chaperoned, stags and a number of other things have helped to quicken the social life of the whole community, instead of the social cliques.

Not only do we have a meeting for

each group in the county every week, but we have county-wide activities in addition to the ones already mentioned. We had last year in our State, eight hundred and twenty-seven boys in these six organized counties who met in conferences to discuss how, as boys, they could help solve the boy problem themselves. Strong papers were read by the boys, stating how they could help to make better citizens. Impressions are made at meetings like these that we believe a large number of people appreciate.

THE COUNTRY CHURCH

In some great day
The Country Church
Will find its voice
And it will say:
"I stand in the fields
Where the wide earth yields
Her bounties of fruit and grain;
Where the furrows turn
Till the plow-shares burn
As they come round and round again;
Where the workers pray
With their tools all day '
In sunshine and shadow and rain.

And I bid them tell
Of the crops they sell
And speak of the work they have done;
I speed every man
In his hope and plan
And follow his day with the sun;
And grasses and trees,
The birds and the bees
I know and feel ev'ry one.

And out of it all
As the seasons fall
I build my great temple alway;
I point to the skies. L. H. Bailey.

FINDING FACTS FOR FARMERS

The Projects of the Office of Markets and Rural Organization

CHARLES J. BRAND, Chief, Office of Markets and Organization, U. S. Dept. of Agriculture

THE Office of Markets and Rural Organization was created because of the recognized need for improvement in the processes of marketing and distributing the agricultural products of the country, and for solving many vital problems inherent in life in our rural communities. It is of little use to increase the quantity and improve the quality if the marketing cannot be done.

The appropriations for the current fiscal year, 1916, divide the work of the office into four main subdivisions: marketing and distributing farm products; rural organization investigations; investigations and demonstrations of cotton standards and cotton testing; and enforcement of the United States cotton futures act.

Co-operative Investigation.

It has been found that co-operative marketing is carried on in the United States to a much greater extent than was supposed. The names and addresses of over ten thousand marketing associations have been obtained by the office. These include co-operative and farmers' elevators, creameries, fruit and produce and other associations, and it has been estimated that over a billion dollars worth of agricultural products are sold each year by co-operative marketing organizations. Improved methods of marketing can be utilized in many cases only by or through co-operative organizations, and a careful study has been made of the methods of organizing and operating such associations. Specimen articles of incorporation, constitutions and by-laws for the different kinds of marketing and pur-

chasing organizations have been collected, and where advisable, assistance is given to groups intending to organize. The investigations undertaken include a study of successful buying and selling organizations in this and foreign countries.

Marketing Business Practice.

In order to bring the greatest returns to the producer and lessen the price of agricultural products to the consumer, the marketing of these products must be conducted in a thoroughly business-like way. The failure of many individuals and of many co-operative organizations selling farm products may be traced, either directly or indirectly, to the lack of competent management and accurate records and accounts. To be successful, wastes and excessive profits must be discovered and eliminated, and organizations of the kind mentioned above must be conducted with a maximum of business efficiency. For this reason the Office of Markets and Rural Organization is making studies of the business practices of farmers' co-operative associations and other agencies engaged in marketing, distributing and storing farm products, with special reference to their accounting systems and methods of auditing, business organization and financing. Suitable accounting systems, which have been devised for rural grain elevators and co-operative fruit associations are in operation in many of these agencies, and systems for commission houses, co-operative creameries and other agencies are being devised.

Surveys, Methods and Costs.

Under our present system of market-

ing food products, the consumer seldom receives any material benefit from the production of an unusually large crop. The functions of our distributing systems are not performed properly when unusually large quantities of food products accumulate in the markets, and though wholesale prices are often so low as to be ruinous to the farmer, the consumer, who buys in small quantities, seldom has the benefit of this. In the studies which the office is conducting to elucidate some of the problems caused by this state of affairs, information is accumulated to show the areas of surplus production of specific crops, dates within which certain areas move crops, usual markets to which these crops are shipped, volume of movement in previous years, a tendency to increase or decrease production, and many other related matters. During the present season special attention has been given to existing sources of market information, and experimental work has been conducted in furnishing a limited market news service for specific crops and areas, in order to ascertain the practicability of a comprehensive nation-wide service of this kind.

Market Grades and Standards.

The object is to encourage growers and shippers to prepare their products for market properly, to show them the advantages of having and living up to grades and standards, and why it is best to use practical, strong, clean, neatly labeled containers. Careful investigations are being made of state and city laws regarding the grades, packing, containers and marking of farm products, of the existing types and sizes of boxes, baskets, hampers, crates, barrels and other packages, and of other related subjects.

Transportation and Storage.

Under this project a study is made of the service furnished throughout the United States by common carriers of every kind in the matter of transportation of farm products, particularly perishables. An effort is made to ascertain the need for more and better service in individual sections and to co-operate with the carriers in the inauguration of such service; to inform carriers as to the needs of shippers, and instruct shippers as to their rights, duties and responsibilities in the transportation of farm products; to determine the economic loss of foodstuffs from lack of sufficient storage, both cold and common, and on account of storage improperly located; and to secure from transportation companies more storage-in-transit privileges on farm products.

Marketing by Parcel Post.

It is probable that the existing means and methods of distributing agricultural products never will be entirely displaced, but there is undoubtedly a field within which marketing by parcel post and express may become effective. During the past few years a considerable public sentiment has developed for the promotion of direct, or more nearly direct, dealing between producers and consumers, with no other intermediate agency than the transportation companies or the United States mail.

Under this project experiments are being made to determine to what extent the parcel post and the services of the commercial express companies may be utilized in this way. Various types and makes of containers are being used in making experimental shipments of butter, eggs, fruit, vegetables and other farm products. Systems for bringing rural producers and urban consumers

into contact and establishing their business relationship upon a proper basis are being worked out.

Marketing Live Stock and Meats.

Studies are conducted of existing markets and systems of marketing live stock, meats and animal by-products. Attention is given to the efficiency of methods of feeding, yardage and handling of live stock and the charges made for such service at the market centers, of transportation facilities, the classification and grading of live stock and meats, and the establishment of standards of quality among dealers, with a view to instructing producers of live stock as to market requirements and conducting a campaign toward a more rational and intelligent selection of meats. Authentic figures representing the actual cost of marketing live stock and distributing meats and animal by-products are almost entirely lacking, and studies are being made, the results of which should serve as a basis for just conclusions regarding the legitimate and proper place of each class of dealer who participates in the marketing process.

Marketing Dairy Products.

These investigations are made in connection with butter, cheese and dairy substitutes, and consist of a thorough study of the methods employed by the producer in preparing these products for market, methods and costs of distribution, market classification, methods of making quotations, market customs and market requirements.

Organization Investigations.

Extensive investigations are being

made by the office, of existing successful organizations which are performing the functions of rural credit banks; organized activity among farmers for credit improvement; the financing of live stock farming; the uses and abuses of store and machinery credit. Studies also are being made of the problem of farm finance on reclamation projects in the West; various crop lien and leasing and tenancy systems; legislation affecting mortgage and personal farm credit; the nature and extent of losses in agriculture, the facilities most helpful in reducing such losses or minimizing such risks. Methods of establishing and conducting efficient facilities for agricultural insurance are receiving special attention and studies are under way regarding organization for the improvement of methods of rural communication, especially between farms and in relation to local markets.

Rural Social Activities.

The object of this work is to aid in the advancement of social and educational conditions in rural communities by the study of typical communities. These studies will be made with reference to their social and educational needs, the work of their existing forms of organization and the possibilities for improvement through organized activity.

Requests for literature or information as to any specific phase or phases of the work of the office will be promptly answered if addressed to the Chief of the Office of Markets and Rural Organization U. S. Department of Agriculture, Washington, D. C.



THE FARMER'S SONG OF PRAISE.

The broad earth bids me forth. I rise
 With lifted brow and upward eyes,
 I bathe my spirit in blue skies
 And taste the spring of life.
 I feel the tumult of new birth,
 I waken with the wakening earth,
 I watch the bluebird in her mirth;

And veiled with wind and sun,
 A treasurer of immortal days,
 I roam the glorious earth with praise
 The hillsides and the wooden ways
 Till earth and I are one.

—Archibald Lampman
 in *Lyrics of Earth*.

THE GRANGE AT WORK

How a Half-Century of Service Is Advancing Community Affairs.

L. J. TABER, State Grange Master

“BY their fruits ye shall know them.” Any organization to merit and hold the respect of thinking people must have a record of past achievements, or present usefulness and future promise. Any careful student of conditions will at once agree that such is the record of the grange.

The caption, the grange at work, is used for two reasons: first, because any organization that is doing no work for the advancement of its membership and community is useless in this practical age; second, because the granges of State and nation are at work for the betterment of rural life as never before. For fifty years this organization has been a force in our national life, and, despite the mistakes of its early enthusiasts, the record of this half century of service is such that today it is enjoying the greatest growth since the “boom days” of the seventies.

In Ohio seventy new granges have been organized and 7000 members have been initiated the first six months of this year. This makes a total membership of nearly 60,000 in 650 subordinate granges. Such growth is conclusive evidence that the Grange is working for the advancement of farm life, and that the farmers of the country are recognizing this fact as never before.

Grange activities are directed along four lines: educational, social, legislative and co-operative. The relative importance of each is in the order named. Occasionally some new organization will reverse the above, but the results, as a rule, will be far from satisfactory, though there are a very few organizations in the state that confine their

work very largely to co-operation and yet are successful.

Every grange should be a community builder and work with the church and school for the advancement and the building of the community in which it is located. It should recognize that its first duty is to develop a community spirit and a community interest in all that will be helpful, not only to its membership, but to all living within its radius of influence. In scores, if not in hundreds, of Ohio communities we can find better educational and social conditions, better roads and farm methods as a result of the work of some farm organization.

Ten years ago an Eastern Ohio boy left his father's farm, because of the lack of opportunity, for office work in Pittsburgh. The year following a grange was organized in that vicinity; it soon developed into the right kind, and it attracted the young people of that section. Today the names of 80 farm boys and girls can be found upon its roll. Not long ago this grange gave an open meeting, and the writer and the young man in question were seated together. After the program, which reflected the ability and intelligence of the neighborhood, was over, the social atmosphere indicated a pure and wholesome life. As we were leaving the young man said to the master of the grange: “How I wish this grange had been going before I left the farm, for one such meeting ten years ago as you have had tonight and I would still be a farmer.” Young men and women by hundreds are today living in some city because the community from which

they came did not have the right kind of social life, or there was not that which gave promise of an opportunity for service at home.

In Pleasant Township, Knox County, more than 40 years ago, a few interested farmers organized Pleasant Grange. They at once recognized that they owed something to the community in which their life's work was cast; so they decided to make their grange a community center. Emphasis was placed on the lecture work and educational side of grange activity. This was not confined to the actual membership, as one meeting each month was open to all who cared to come. These community meetings developed an interest in other lines of grange work, and the membership increased until a hall was found necessary. A convenient and attractive grange home was built. While it was made possible by the work and contributions of the grange members, it was opened to use for every good movement that tended to improve that section. As a result of this unselfish activity, we find that farmer institutes, agricultural extension schools, etc., have been promoted. A farmers' lecture course has been held in the hall and recently a co-operative cow-testing association was organized. All these activities radiate from grange influence, with the result that farm life is brighter, real estate is enhanced in value, but most important, the boys and

girls in that section are conserved for the farm.

One dark night, 12 years ago, a few miles out of Alliance, in Stark County, Fairmount Grange was organized with 18 members, but among these were some community leaders, and they at once began to work along all four lines of grange usefulness, placing emphasis on the lecture hour and co-operation. The membership soon increased until a hall was necessary. A splendid two-story hall, with dining room, kitchen and the necessary conveniences for a real grange home, were added. A piano was purchased, a chorus was organized, a lecture course was held, as well as institute, extension school, etc. Its business agent has been tireless in his efforts to make his department of service to the membership. During the past year he has purchased fertilizer, lime, coal, binder twine and sugar by the car load. The enthusiasm and activity of this organization is an inspiration to all who visit it. Now it has the honor of being the largest, as well as one of the most active, organizations in Ohio.

Incidents like the above show the possibilities of grange activities of the right kind to vitalize and stimulate the best things in farm communities. When we have a good live working grange in each of the 1350 rural townships in Ohio, Buckeye agriculture will take a long forward step.



OHIO FARM WOMEN'S CLUBS

Neighborhood Organizations That Promote Household Interests

"YOUR Ohio farm women have secured, while farm women in other states are still only hoping to get a state organization," wrote the secretary of the International Association of Farm Women to The Ohio Farmer. "How did they do it?"

How and why they did it is a story of the dream of Harriet Mason, the "woman editor" of The Ohio Farmer, of the inspiration crystallized by the

wire, in many instances not seeing each other's faces or going into one another's homes for weeks, and even months, at a time.

True, there were the granges, and some farmers' clubs, but women will not discuss their housekeeping experiences and ideas in a mixed meeting with a tenth of the zest they show when by themselves. Many a time at grange meetings Miss Mason had noticed how



HALL OF PLEASANT GRANGE, KNOX COUNTY.

work of a little group of farm women in Paulding County and of another group in Greene County, who had been demonstrating for some time that farm women are not too enthralled by work to cast care away for one or two afternoons a month and get together for an acquaintance feat. Why should there not be such neighborhood groups all over Ohio? Miss Mason had found in her contact with farm women over the state that the telephone had resulted in their doing most of their visiting by

women who would get their heads together and whisper animatedly about the subject under discussion could not be induced to talk out loud about it before the roomful of men and women. And so the idea grew more and more insistent—why not have meetings for just the women in friendly little intimate neighborhood groups, where they could just sit around the room and talk conversationally about the things that are of supreme interest to them?

Besides, hundreds of farm women

cannot go out to grange meetings at night regularly, because the younger ones have little folks who need to go early to bed, and the older women themselves need to go to bed early. Therefore, there came the vision of afternoon meetings for neighborhood groups, so that if horses were all busy or the roads too muddy or rough, they could just walk over to a neighbor's and spend a couple of pleasant hours with the other neighbor women.

And further, more communities were wanting the university extension schools and women's institutes than could be accommodated, so why could such neighborhood groups not eventuate into regular monthly or semi-monthly schools to instruct themselves, under suitable direction, through their farm paper and the state university?

The idea was discussed tentatively with several representative farm women by The Ohio Farmer home economics editor, then she called a meeting November 12, 1911, at the State Grange, to launch the work. At that meeting eighteen ladies promised to go home and start clubs in their localities which should serve as models and inspiration for the spread of the movement. Of these eighteen, only the following nine made good: Mrs. Eugene Cranz, of Ira, Summit Co., who organized No. 1, December 7, in two weeks after her return from State Grange; Mrs. George Riedinger, who organized No. 5 in Lexington Township, Stark Co., No. 21 in Beloit, Mahoning Co., and No. 45 in Marlboro, Stark Co.; Mrs. Mary Gladding, of Windsor, Ashtabula Co., who organized No. 6; Mrs. Charles Pontius, Mrs. I. R. Stoner and Mrs. J. H. Sheets, of New Berlin, Stark Co., who started No. 11; Mrs. R. O. Hinsdale and Mrs. Arthur G. Abbott, of Wadsworth, Medina Co., who started No. 13; and Mrs.

Frank Porter, of Bath, Summit Co., who started No. 17.

The old clubs referred to at the beginning of this article (Silver Creek, Greene Co., and Harrison, Paulding Co.), came in immediately as No. 2 and No. 3, respectively. By the end of 1912 there were 30 clubs in 21 different counties of the state. To date, two and one-half years later, the number has reached 75 in 33 different counties, with 1200 members.

There is a county federation in Huron Co., which has 12 clubs; the average membership of each club is around 17. The clubs meet afternoons, monthly or semi-monthly, but occasionally during the year hold picnics or evening parties for the families of members, and sometimes they come before noon and have lunch together. Some of the clubs have arranged very good entertainments. One Huron County club put on a play last winter that netted the members a lot of fun and the club treasury a good sum.

A state federation was organized at the State Fair in August, 1912, and the annual meetings are held at the State Fair. However, there is considerable feeling that Home Makers' Week at the University in February would be a much better date. The chosen color of the club is grass green (velvet ribbon), and a rousing club song has been composed by Mrs. Frank Porter, who has also designed a neat and distinctive Ohio Farm Women's Club pin.

Most of the clubs are studying the topics arranged by The Ohio Farmer, the lesson plans and reference articles being arranged and published by this paper in time for the clubs' use. This year's monthly topics are, consecutively: Farmhouse Heating, Farmhouse Plumbing, Farmhouse Architecture, The Women and the Garden, The Farm-

house Yard. Composition of Vegetables, Grains, Meats and Fruits, How to Combine Foods, What Our Club Can Do to Improve Our Community, School Children's Foods, Our Duty to Our Schools, Infectious Diseases and Our Quarantine Laws, and Personal Hygiene.

All the promotion work and correspondence, record keeping, lesson planning and reference article publishing is done by The Ohio Farmer, through the home economics editor, Miss Mason, whose lifetime of close association with

neighborhood and community improvement in school and social conditions. The Paulding County clubs united and paid the expenses of a delegate to the School Congress in December, 1912, because the township treasury had no funds available for this purpose. This delegate, Mrs. Maloy, of Club No. 10, made a very effective appeal for the enactment of the new school law. And nearly every one of the clubs did fine survey work for the school survey commission.



No. 5. LEXINGTON TOWNSHIP, STARK COUNTY.

farm conditions is the vitalizing force in her work along this line. While Mrs. C. W. Foulk was connected with the Extension Department of the University she rendered valuable assistance and encouragement.

Club members very generally report that these clubs have contributed very largely to making life more pleasant in their neighborhoods; they have developed leadership, discovered latent talent and revived rusty talents and accomplishments, and have, in numerous instances been the promoters of real

By means of these clubs Ohio farm women are getting to know each other better, not only in their own localities, but all over the state, for an increasing number meet at the annual every year, and last February during Home Makers' Week at the University quite a number fitted names to faces, for they are learning many new names through the reports of club doings in The Ohio Farmer, and through the annual printed roster. It is an appreciated and growing movement, because it fills a wide need.



COUNTRY LIFE WEEK AT OHIO STATE UNIVERSITY



That the country church can be successfully utilized as a center for many rural activities, and that it must be an active agent in the advancing of social, recreative and economic conditions of the community, was brought out by a number of speakers at the Country Life Week which was held at Ohio State University, August 2-6.

The work of Rev. C. M. McConnell, of Lakeville, Ohio, shows that this is true. Mr. McConnell has rented a hall near the church and established a gymnasium and a clubroom for men and boys. Last spring he rented an orchard, secured state aid, and held a number of pruning and spraying demonstrations, to which he invited all the people in the community. Rev. McConnell believes that these features help the minister to become a real leader in his community. "The only thing that keeps some churches alive is the graveyard beside them," said Mr. McConnell. "In many cases the graveyard is made more attractive than the churchyard."

To emphasize the need for leaders in rural life work, Rev. W. E. Grove, of Old Fort, said that in Seneca County there are 78 churches, 13 of which are "dead," 15 are "dying," and 23 are at a standstill. He has planned the work of his church so that it includes religious, educational, agricultural and civic activities. Two tennis courts have been built in the rear of the church and athletic associations have been organized. He has been successful in securing centralized schools for

his community and insists that teachers should be employed to establish and promote rural organizations.

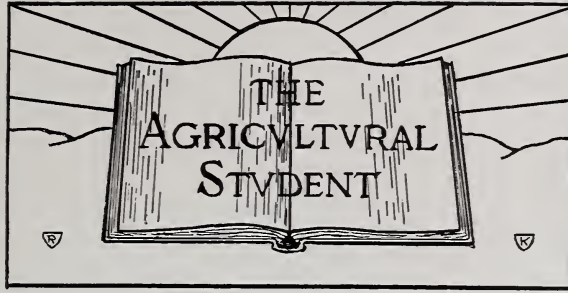
Rev. C. L. Cole told how he conducted an extension school in the church and how he used a small printing press in the basement of the church to print the church bulletins, announcements of community meetings and gatherings of interest in the community.

Other addresses were given by C. G. Williams of the Ohio Agricultural Experiment Station; J. H. Snowden, editor of The Pittsburg Banner; G. Walter Fiske, Clark S. Wheeler, George W. Bush and professors from the college of agriculture. Moving pictures of Ohio farm operations were shown at the evening sessions.

C. O. Gill, executive secretary of the Ohio Rural Life Association, reported that the survey of the churches of Ohio was about completed. This includes such items as the location of all the churches by denominations, membership, etc. Prof. Paul L. Vogt of Ohio State University emphasized the need of some agency to deal with the organization of the church, so that it can function in many features of rural life. L. J. Taber, State Grange Master, and J. Knox Montgomery, president of Muskingum University, also addressed the meeting.

The attendance numbered 130, more than twice that of last year. Thirty-two counties were represented.





OF
OHIO STATE UNIVERSITY.
A MEDIUM FOR EXCHANGE OF IDEAS BETWEEN COLLEGE AND FARM

Published by the Students in the College of Agriculture.

Established 1894.

Subscription Price, One Dollar the Year.

Entered at the Postoffice at Columbus, Ohio, as Second Class Matter.

STAFF.

C. M. BAKER, '16, Editor-in-Chief.

R. J. KINKEL, '16, Art Editor.

D. G. SWANGER, '16, Secondary Agriculture.

Associate Editors:

D. P. Evans, '16. D. N. Lutz, '16.

E. T. DAVIES, '16, Business Manager.

H. W. ZUERCHER, '16, Assistant Business

Associate Business Managers:

R. L. George, '16.

R. S. Tucker, '17.

C. H. Elliott, '16.

I. O. Koch, '17.

COLUMBUS, OHIO, SEPTEMBER, 1915.

EDITORIAL

Ever since 1894, when Charles W. Burkett launched the first agricultural college publication in the United States, **THE AGRICULTURAL STUDENT**, this magazine has continued to present, in logical manner, the rural opportunities and the methods used in their advancement and development. This has led us in this issue to present the facts as they now appear, for the interest in country life is developing faster than many are aware.

We need no longer speak of "the rural problem," but rather "the rural opportunity." The rural opportunity is a great movement, offering real, vital possibilities which, if grasped, mean the development of a great, intelligent and industrious race.

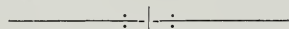
The struggle for existence in the city is too fierce and the opportunity for

childhood and youth for self-expression and initiative is too meager. "Individuals may stand, but generations will slip," on such an inclined plane of life.

It is the duty of our publication to help in the focusing of the public mind toward the opportunities of this great movement and to turn the scales without delay toward country life. In this issue we have presented one great idea—rural life—showing what factors are contributing to the advancement of the movement. Broad interpretation of the rural life movement will reveal that there are still many commercial factors to solve for the farmer—that those features which tend to make farm life more pleasant and more profitable have their place in considering the question. We have presented not only the theory of the best leaders of the movement, but the factors which have actually

contributed to the advancement of rural life.

However, these commercial factors are considered because they are a definite means to an end. A profitable agriculture must form the basis for all activities of the movement. Better farming is followed by better living; better living by better thinking. Or, as one of our leading farm papers states the idea, "better farming, better homes, better citizens."



The movement for a richer rural life is now before the country. It is the subject for discussion everywhere; it is in the limelight; the literature on the subject is voluminous. Educational papers, magazines and even the lay press are devoting much space to the discussions of country life.

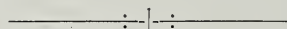
For the first time in this country the possibilities of rural life were made the subject of investigation and report of a national body. We have had many great rural meetings and conventions, where people were given opportunity to hear and participate in discussions pertaining to the opportunities of country life work. As a result we see the development of many features for the benefit of the farmer—rural free delivery, parcel post, better roads, etc. Investigation, comparison and reflection brought about solutions.

Perhaps the greatest factor in the development of rural life is the agricultural college. With its instructional systems it not only trains students, but provides a means whereby any farmer in the state can secure its services through the extension system and county agriculturalist work. The college now serves a two-fold purpose, that of developing the leaders and dis-

tributing the knowledge which scientists have found out during the past generation. The possibilities of the extension service in advancing rural interest now seems to have no limit.

Of course, the stirring of the waters has produced some froth. There is considerably sound and fury in the discussions and the things attempted in the movement. But, after all, the main thing is that the power, the energy, the thought and the enthusiasm have all been started in the right way. When we have passed from the sensuous and erotic wave, on the crest of which we seem, at times, to be carried along, we can, with profit, "go forth under the open sky and list to Nature's teachings."

With the opportunities now at hand life in the country can be made the best and most complete possible. Country life will then "be the best cradle for the race."



We are often reminded of the fact that even in our greatest agricultural sections there is a

OUR POSITION IN RURAL WORK.

constant trend toward the city. On the other hand we hear voices from afar off proclaiming that the urban trend has reversed, and slowly but surely the men of the city are looking countryward. It is probable that these conditions will always exist, but they have no direct opposition to the rural life movement. There will always be country people moving to the city, and to this no objection is raised, so long as there are able ones to take their places in rural advancement. It is the wholesale evacuation of the country, where land values have been reduced below normal by the activities of mail order houses, or for reasons of poor schools

or roads, that must be guarded against. To fill the ranks with a stronger generation is the solution. "Back to the land" is by no means the movement that will make the most out of rural life. It in itself is a problem, for there are many "city farmers" who look to the country as a place where peace, contentment and happiness reign supreme.

Our position then, it would seem, would consist in extending those agencies which will aid in the continuance of an intelligent race, rather than breaking the wave of the population toward the city. The features which make country life unpopular must receive our attention; we must advance our rural education system, offer more social opportunities and revive many of our country churches.

Since the advent of the rural life movement the community center has proven itself to be one of the best factors in country life advancement. Sometimes the center has been in the school, the grange, the church or the town hall. The community center has made it possible for the country people to mingle freely, to obtain larger social privileges and to co-operate in many features. However, one serious detriment to the idea is that township lines, school districts and regional influences have been brought to bear upon its location.

It is believed by students of rural life that rural readjustment should leave the village as the logical center for the community house. It is probable, if not certain, that the greater portion of the farmer's activities will lead him toward the village. Then why

should the community center house be elsewhere?

The ideal conditions result when the village and its rural contingency are brought together on the basis of co-operation. The lecture course, the chautauqua and various educational activities can generally be carried on to a better advantage in the village than in the open country. As a matter of necessity the extension school, the farm institute and the school exhibit are all held in the village.

There should be no barrier between the country people and the village folk. All should work together for the advancement of both community and town.

Country Life Week at the Ohio State University was a success. It brought together ministers, teachers and laymen from 37 counties of the State, and thus brought into touch with one another many

COUNTRY LIFE WEEK. men who are facing similar problems. If there is any impetus in that knowledge which comes from personal experience, it was there where anybody was at liberty to appropriate it for home use. No doubt there was; there always is in any gathering where men engaged in the same work in different places come together to exchange ideas, each telling the others what he has done to win and how great his failure or success. The man who achieved immediately becomes the center of observation and is not allowed to get out of sight until he has told about his methods. There is nothing so inspiring as success, and we are assured that there was enough success in the meetings to furnish enough inspiration to go around.

Better results in the country church,

school and community are to be expected during the coming year than any that has passed. We shall expect to hear a revival of the community spirit in many localities, an increase of prosperity and content, and a perceptible increase in the next Country Life Week in the number of apostles of success.—The Columbus Dispatch.

With the appointment of a special leader for the county agriculturist work in Ohio, the possibilities of this phase of extension work is destined to become popular in the placing of agricultural information in the form of a demonstration at the disposal of the farmer.

The state leader projects are outlined as follows:

(1) To assist in the federation of county interests, such as granges, farmers' clubs, breeders' associations, etc.

(2) To help organize community forces already present, such as organizing a community for the production of better seed, better live stock, etc.

(3) To give aid in community buying and selling and especially to bring producers and consumers in closer touch.

(4) To study local economic conditions and to learn how economic handicaps can be removed.

(5) To demonstrate better farm management.

(6) Least important, to give answers and assistance where possible and where requested.

Ohio now has ten county agriculturists, and during the year several more will be appointed. The work in Ohio is new, but the Hake bill, a state law providing that the commissioners of a

county can appropriate any amount up to \$1500, will be a stimulus to the movement. It deserves the support of every farmer and student of agriculture in the state, and all should work together for the development of the idea.

Whenever any of the readers of "The Student" wish to get information about

OUR

ADVERTISERS.

the building of a silo, the use of improved farm machinery or the use of fertilizers and feed stuffs, or any feature connected with commercial lines in agriculture, they will find these facts freely and gladly given by our advertisers. They maintain information bureaus operated by efficiency experts so that the latest and most efficient methods used in present-day agriculture are easily obtained. Write to them when in doubt as to the methods to pursue in carrying out your project. It will pay to keep informed on many of these subjects by reading the advertisements, at least.

In buying from our local advertisers, you will produce a state of co-operation which bring benefits to all concerned. They take an interest in your wants and are able to serve you more effectively. Incidentally, "The Student" will be able to develop into a larger service.

We wish to express our appreciation to The Ohio Farmer, The National

Stockman and Farmer, The Payne Investment Co. of Omaha, Neb., The International Harvester Co. and The Field

Illustrated for cuts used in illustrating this number.

VOCATIONAL AGRICULTURE

Practical Systems of Instruction That Encourage Farm Life.

GEORGE ALAN WORKS, Professor of Rural Education, Cornell University

An account of the development of agriculture in the high school system of any state can be nothing more than a statement of progress. Not enough has been accomplished in the most advanced states so that the work is in any considerable measure past the experimental stages. This article is written with full recognition of this condition of the work in the New York State schools.

The schools (departments) of agriculture, mechanic arts and home-making, as they are designated by the state law, are considered as partnership enterprises between the state and local community. The state pays two-thirds of the salary of the first instructor in the school and one-third of the salary of each additional instructor. In addition, the state puts as much money into library and laboratory facilities as is furnished by the local community. The agricultural instructor must devote his time exclusively to teaching agriculture and he must be employed for the twelve months of the year. In the main the partnership has proved very satisfactory. The growth of the schools has not been rapid, but it has been steady. In the initial year of state aid, 1911, seventeen schools were established. During the coming year there will be about sixty of the departments. In but few cases have there been lapses after schools were once established.

The students in the agricultural department devote somewhat less than one-half of their time to agriculture. The remainder is given to the study of the basic sciences, history, English and mathematics.

The agricultural subjects by years are: First year, poultry husbandry, farm mechanics; second year, farm crops, soils and fertilizers; third year, animal husbandry, fruit growing; fourth year, farm management and farm machinery. If a student desires to take agricultural work of a given year he must take both subjects for that year. The work of each year requires two periods daily. This arrangement has a number of advantages, one of the most marked of which is the fact that it allows the instructor considerable latitude in adjusting the time to be given to each of the subjects for any year, permitting adaptation to local agricultural conditions. This is especially desirable in a state which has a wide range of specialized lines of farming.

During the progress of his course each pupil is required to carry out three home projects, and the credit for the work of the classroom during the previous year is contingent upon the completion of the home project. Essentially, the home project consists of a piece of agricultural work for which the pupil makes definite preparation in school, and which is carried out on the home farm under the direction of the teacher of agriculture and with the co-operation of the home. Cost accounting is done in connection with each project, which lays a good basis for some of the future work in farm management.

The projects conducted by individual pupils are of three classes: productive, improvement and demonstrational. The productive is by far the most pop-

ular, and some of the instructors are of the opinion that it should be the only kind. Possibly this may be true for the early work. The following projects, selected from reports for 1914, will give some idea of the size and character of the individual projects.

tical laboratory work. As an illustration of this the work of the class in dairying the past week may well be noted. The particular instruction in the classroom for the past few weeks has been along the lines of milk separation and the manufacture of butter. Consider-

Agricultural Subjects Studied During Current School Year	Title of Home Project.	Scope.	Pupil's Project Income.			Family Income From Pupil's Project.		
			Net Profit.	Paid Self for Labor.	Total.	Labor.	Rent, Seed, Etc.	Total.
Farm Crops.	Potato raising	3/5 acre. ..	\$77 00	\$15 20	\$92 20	\$2 10	\$20 70	\$22 80
Poultry	Poultry raising	1500 chicks.	616 75	148 75	765 51	.....	42 00	42 00
Crops	Bee-keeping	12 hives ...	46 99	42 58	89 57	1 00	12 58	13 58
Poultry	Poultry raising	100 chickens 1 year ...	165 36	31 17	196 53	.....	11 40	11 40
Farm Crops.	Sweet corn for canning	3 3/4 acres ..	31 76	24 20	55 96	19 50	18 00	37 50

Besides the individual projects there are group subjects. In such cases the project is handled by a class, or in case it extends over several years, succeeding classes take a part in conducting it. A good illustration of the latter is now being conducted by the students at LeRoy. A neglected orchard near the school has been rented and the students are renovating it under the direction of the instructor. It is planned to keep this orchard as long as possible and use it for instructional purposes. It is not too large for the pupils to handle without an undue amount of routine.

A case of a group project completed in a relatively short time is furnished by the following account taken from the local paper at Perry:

"The equipment of the school makes it possible to perform some very prac-

able difficulty was experienced in obtaining milk at a sufficiently low price to warrant the making of butter.

"Finally the students decided to buy the milk and take their chances on securing profits to cover expenses. One hundred and thirty quarts were purchased at 5 cents per quart. On account of the farmer not having the amount of milk to spare from one day's production, 75 quarts were brought to the school building, where it was separated by the students with the separator in the department. The other 75 quarts were skimmed the next day by the farmer, since he did not wish to spare the skimmed milk. For this skimmed milk the students were allowed 50 cents. With the cream on hand the next problem was to ripen it without impairing its quality, since it must be ripened without a starter, the

temperature of the laboratory being variable both day and night, without a cream-ripening vat, and with the fact in mind that the ripening process must be hastened to finish the making of the butter before the week end. This was finally accomplished, and $14\frac{1}{2}$ pounds of good butter were made. The butter in pound prints, bearing the stamp of the Perry High School, were sold at 40 cents per pound, the skimmed milk, together with the buttermilk, was made into cottage cheese, part of which

13 lbs. of plain cheese at 10c....	1.30
Skimmed milk (farmer).....	.50

Total	9.03
Total profit.....	2.23

As previously stated, the teacher of agriculture is required to stay with his pupils during the summer vacation. The main purpose is to provide for proper supervision of the projects during the summer months. An effort is made to visit each student about once a week.



HOME PROJECT OF ELSWORTH WOLFANGER, ATLANTA, N. Y.
Three Hundred and Eleven Bushels to the Acre.

contained walnut meats; the walnut cheese was sold for 13 cents per pound and the plain cheese at 10 cents."

The experiment resulted as follows:

Expenses.

130 qts. of milk at 5c per qt.	\$6.50
Salt, coloring, walnut meats, parchment paper, etc.....	.30
Total	\$6.80

Receipts.

$14\frac{1}{2}$ lbs. butter at 40c.....	\$5.80
11 lbs. walnut cheese at 13c.....	1.43

The visitation of the home projects from time to time brings the instructor in contact with the homes of the pupils and as a result the teacher finds that an extension work of an intimate and natural kind has developed; thus the schools are making their influence felt among the farmers in the various communities. The following quotation from the extension diary of one of the teachers shows the nature of their work:

Extension Diary.

Frank West called up to see if I

could come out Saturday afternoon and help him start a set of accounts. Calvin Drew brought in the seed corn.

Niles Wilson brought in some apples badly affected by "scab." He wants to spray next spring. Anxious to have a machine purchased. Will buy one-quarter share in one. Loaned him a copy of Wallace's bulletin. Wells says that his father is talking about buying a thoroughbred Guernsey sire.

Went to look over Riker's flat for soils trip. Flood plain, rock ledge and a valley slope are accessible. Go next Wednesday. Riker wants to raise some alfalfa. Went to West's in the afternoon and helped him start a set of accounts. He wants the farm management class to use his data and offer suggestions.

Talked at grange about visiting the rural schools and explained the work we are doing here. We want to get some of the older boys in for the winter course. R. Barnes asked me to visit his place and advise him concerning alfalfa growing. L. Barton intends to remodel his cow barn. He wants us to visit his place and suggest plans.

Carl Broder called up to know if we could help him trim his orchard. I told him we would come out and start him. Fred Niels brought in some new varieties of potatoes for the farm crops class.

Went down to Fred Wood's after school to find out about taking the animal husbandry class there next week to see his sheep. He is talking about hot-house lambs. I am to send him some literature. He says he will be glad to have the class come down, and offered to "hook up" and come after us.

No formal arrangements have been made for co-operation between the teachers of agriculture and farm bureau managers, but in many cases there has developed a co-operation that is proving advantageous to the communities as well as to teachers and their managers.

A few of the schools have developed short courses for the older farm boys who cannot take advantage of the full year's work. In some cases farmers themselves have come into these courses. This feature of the work is capable of considerably more development in some communities, and an effort will be made to develop it as rapidly as possible.

Those who are in a position to follow the work intimately realize that it has weaknesses; it is only a beginning; but none of the difficulties are insuperable, and the benefits which are already evident from the work give confidence that ultimately the influence of these schools is going to be marked in the development of country-life.

There's never a rose in all the world
 But makes some green spray sweeter;
 There's never a wind in all the sky
 But makes some bird wing fleeter;
 No robin but may thrill some heart,
 His dawn-like gladness voicing;
 God gives us all some small, sweet way
 To set the world rejoicing. —Selected.

AN OPPORTUNITY IN RURAL SCHOOLS

How the Teacher Can Focus the Interest Towards Country Life

A. B. GRAHAM, Farmingdale, New York

The rural school presents an opportunity for the improvement of educational, social and industrial conditions equal to that of any great college or university. The scope of the work or the reach of its influence may not be so extensive, but the good arising from its effects upon the people who are served and who support it is far more immediate and intensive.

sympathetic spirit of a teacher, a leader, who has a vision of greater things for both young and old. A real teacher brings into the schoolroom and into the community a spiritual atmosphere which, in time, will find its way to the remotest parts. One who is desirous of being a really helpful agent dare not be a destructive critic, a cynic or a gossip; he must be one who is



“THE RURAL SCHOOL PRESENTS A GREAT OPPORTUNITY.”

Whether or not the most is made of this opportunity depends very much upon the motive of the teacher and his attitude toward the people. From the country schoolhouse should emanate a variety of influences and sympathies that touch not only the homes from which little children come, but they should reach to every home and to every person in the district. The schoolhouse and playground is a cold and meaningless place without the

able to take into consideration the conditions under which people live, their interests and financial resources which, in a great measure, form the foundation upon which better things are to be constructed. He must be willing to give ear to those who disagree with him. He must see the elements of truth in another person's statements, but he must not form the habit of entering into warm arguments with everybody because their conclusions, based upon

their experiences, do not agree with his, which may be based upon entirely different experiences, or upon theory alone. What one may learn, not so much of how people think, how they act, and how they conduct their business, but why they think as they do, why they have certain habits and practices, and why they follow certain occupations and pursue certain industries, is far more important and should make up a part of the course of study, not for the pupils, but for the teacher. This is worked out from conversation with people, not by making oneself a walking interrogation point, but through ordinary talk and by keen observation; one can gradually place himself in another person's shoes and can have that common understanding that makes him feel that he is one of them and with them, but not above them, except perhaps in some ideals toward which he hopes to lead them.

In attaining this ideal of the enrichment of their social life or the improvement of their industry, it must be kept well in mind that permanent growth and improvement are never made rapidly. Among young people changes may be wrought more rapidly than among old people, whose thoughts and practices are more or less fixed; with them change is slow and results should be waited for much more patiently.

During a noon hour, a few years ago, the writer called at a little country schoolhouse among the hills of South-eastern Ohio. It being a warm fall day, the door was open, and he stepped into the room and looked around among a number of the largest boys and girls. He was able to recognize no one whom he thought to be the teacher, and thereupon asked, "Where is the teacher of this school?" In response to his question, quite a young woman arose, and

with a snap in her eye, replied in a clear voice, "I am trying to be the teacher." It is needless to say that she was the teacher in every sense of the word. The children believed in her, the parents had faith in her, everybody felt that they had a leader in the community. Her writings and figures on the blackboard were models of neatness and form. Taking pains with her work had become a habit. The window shades were straight, the unused coal scuttle and poker were tucked away in a curtained cupboard. The children's desks were in order. There were no apple cores, crumpled rolls of paper, or nut hulls in unused desks. No crumbs or pieces of meat or bread were allowed to remain on the floor after the mid-day lunch; the writer remained long enough to see each pupil clean the floor and seat where he ate his lunch. This teacher was scrupulously neat and clean, but there was no show of an effort to keep up with the latest fashionable fads. The children had been led into following many of the ideals set before them by this young teacher. She was firm, but pleasant. She had won their respect without verbally commanding it. There were some boys and girls who were her seniors, and perhaps any one of them had physical strength sufficient to remove her from the building. During the noonday visitor's stay he heard enough in the "Excuse mes," "Thank yous," "If you please," and whispered invitations for the teacher to come and join them in their games, to know that there was more that made for culture and refinement in that school than a geography lesson, a problem in arithmetic, a construction in grammar, or the spelling of a word.

Where such a teacher is found, it is needless to say that parents and others welcometheopportunity to come to the

welcome an opportunity to come to the afternoon or evening exercise, where the acquaintance of the people may be extended, and where there will be more or less of a focusing or crystallizing of public sentiment toward the welfare of the school. Under leadership, not of the proclamation brand, the people of the district will show their appreciation by helping "to make things go." A school atmosphere is being created.

Provision should always be made for bringing the community together on

of adventure or travel. Such persons and any others who can contribute to the program of an evening should be sought. Eating together is one of the oldest customs associated with social life. On such occasions many oldtime differences may be laid by. The schoolhouse may serve as a meeting place for the further education of the adult. At one time a twenty-minute talk should be given on customs in travel, in which checking of baggage, hotel registration, use of bills of fare, and other prac-



"PUBLIC SENTIMENT SHOULD BE FOCUSED TOWARD THE SCHOOL."

some occasion in the name of the school. An evening meeting at the schoolhouse, in which a short program of literary and musical selections for the entertainment of adults is given, and one or two subjects relating to the general welfare of the community and the school are discussed, should be held at least once a month during the winter season. Closing day and special exercises should furnish additional opportunities for social intercourse. In almost every neighborhood there are adults who can recite well, play some musical instrument or tell some story

tices should be discussed. Another short talk might deal with how checks make their way back to the home bank. A discussion of some of the following subjects by the best informed men and women in the community will clear hazy ideas.

1. Methods of getting money into circulation.
2. Duties of a local justice.
3. A profitable home garden.
4. Planting the home yard.
5. Poultry raising that pays.
6. Home sanitation.

7. What to do until the doctor comes.

8. Home amusements.

9. Beautifying the home.

10. Difficulties of the credit system.

11. Home conveniences.

Industrial education is far from being the panacea for all rural ills. It is an important feature of school work, but under present conditions in our rural schools, the writer doesn't believe that the so-called garden, which is likely to be more of a weed garden, has any place in the school premises. The important work for the teacher is to discuss with the upper grade pupils, at least once or twice a week, the theoretical features of farming, based upon a text-book, and to perform such experiments as will illustrate soil, seed, water, plant and animal behavior. There should be at home a small garden or plot where certain crops may be raised which will verify the theories of the text-book and the phenomena of the experiments. At the same time, the crop which is produced on such a plot should become the property of the child, to develop in him the sense of proprietorship. In the course of discussions on physiology and hygiene, experiments with foods should be taken up at the time the chapter on foods is studied. Home sanitation and other closely related subjects may be discussed and experiments performed at the time ventilation and other hygienic subjects are being considered.

The great work of a teacher is to assist the child to develop the right attitude toward work and life in the home and on the farm. Much of this can be done by encouraging boys to enter into the raising of crops, with a view to making a little exhibit of their best products at the school, and by arousing the interest of the girls in the

making of simple pieces of clothing, the baking of bread, making of common forms of pastry, and the canning of fruits and vegetables. A very interesting exhibit composed of such material, made by school children some years ago, served its purpose quite well without the awarding of any premiums. The work was judged by competent persons and only rating was given.

A very helpful feature in pushing back the horizon of the young people's observation and experience is the little school excursion. This does not need to include every member of the school, but only those of the upper grades and some of the young people who have been out of school a year or two. A visit to the office of the local or county paper to see the typesetter putting together the news items, advertisements, setting the cuts, etc., for the next week's issues, will make them appreciate the work of a printer; a trip to the railroad crossing, to see how one railroad crosses another, will be very interesting and instructive. If there is a canning factory, a paper mill, a glass factory or a smeltery, or any place where any special crops or peculiar animals are grown or kept, such points should be visited by small groups of pupils.

Every schoolhouse should have within it a few good books. If half the amount spent for useless apparatus were spent for well-written books of general information, containing not over 250 or 300 pages, every home could have carried into it the very best of history, literature and science. When such books have been used again and again until they are thumbled and worn and ready for the junk-pile, they have served a greater purpose than all the high-priced big books that could ever be gathered together in the name of a

library. It is not what is in the book that makes a good library; it is what may be gotten out of the book.

Games should be made as much of in the country school as the regular program of recitations, for in them children learn to live with each other. Every effort should be made to provide for such games as will meet the needs and tastes of the children of different ages. The old grapevine jumping rope, the grass-covered playhouse, the fox and geese ring, the tippy-up-bat, and the see-saw board should have a place

sentiment will protect that which the public appreciates. Local pride should be quickened into knowing that the little frame schoolhouse in Willow Hollow, with its tastefully decorated walls, a well planted yard, its coterie of aspiring youth, and an inspiring teacher, are as important to the success of this commonwealth as the more stately school building bearing the high sounding name of a city or village.

None of the features referred to in this article are beyond being accomplished by any resourceful teacher;

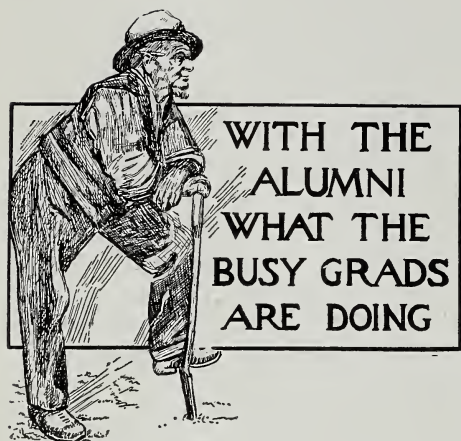


WHERE COMMUNITY PRIDE SHOULD CENTER.

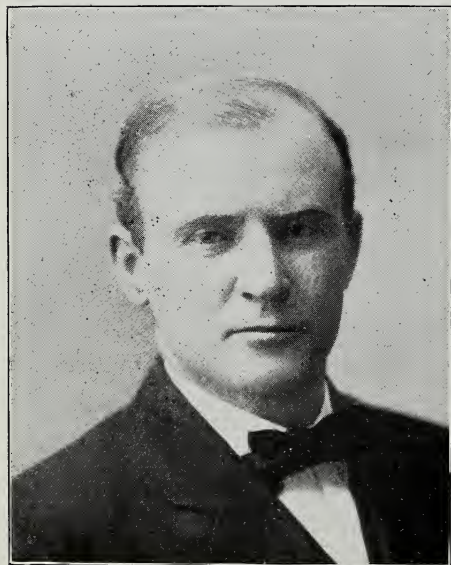
on a well-arranged playground. The counting-out rhymes and other rigamaroles should never be allowed to fall into disuse. Play is a part of life for both old and young, and its importance should never be minimized.

The rural school ground is an index of community pride. The exposed ash pile, the front yard coal or wood house, posted bills, etc., should give place to screened out-buildings, well selected shrubs and common flowers. Public

but he must have the patience and tact to work them out. The object is to develop the boy or girl into the greatest usefulness to which the environment of the home, the church, the school, and society in general may contribute. The real teacher is but an agent who is able to see the material round about him, and can bring it together at the school as a center, from which it may be reflected into the lives of the people.



When the members of the State Board of Agriculture met in August to select the state secretary of agriculture, they determined that the new secretary should be chosen from his merits as a practical farmer as well as one who has administrative ability. The combination of such features was



found in the person of Renick W. Dunlap, a live stock farmer living near Kingston, Pickaway County, who was graduated from Ohio State University in 1895.

While in the University Mr. Dunlap characterized himself by his gridiron work, playing in every game of the season for four years, his only armor being a small patch of tape around one thumb. He was captain and manager of the team in '95 and has been mentioned a number of times by sporting artists as a most likely candidate for the mythical All Ohio State team chosen from the gridiron heroes of the past twenty years.

After graduation he returned to his home farm at Kingston, Ohio. He was the first in his community to use commercial fertilizers intelligently, and during the first year that he was out of college he grew as much wheat on fifty acres with the aid of fertilizers as his father did on one hundred and fifty acres with no fertilizers.

He was the first to build a silo, to grow alfalfa and to use silage in the growing and feeding of beef cattle. Live stock farming has always been his hobby. At the present time he has a large herd of Duroc-Jersey swine and is feeding a large number of cattle. Percheron horses also form a valuable asset to the live stock on his farm.

That Mr. Dunlap is particularly fitted for his present position is shown by the fact that he has already served the people of Ohio to no small degree. He has always been active in institute and grange lecture work. In 1903 he was elected to the state senate and made chairman of the committee on agriculture. He was author of the commercial foodstuffs bill in 1904, which regulated the sale of oysters, canned goods, etc. In 1906 he was elected Dairy and Food Commissioner, and re-elected in 1908. After serving the second term he returned to his farm until appointed state secretary of agriculture.

Mr. Dunlap was one of the pioneer students in the Ohio college of agriculture and was a member of the first staff of *The Agricultural Student*.

F. W. Duffee, '15, has accepted a position as instructor in agricultural engineering in the Agricultural College of Connecticut at Storrs, Conn.

Virgil Overholt, '15, is representative for the agricultural engineering department in the extension service of Ohio State University.

C. J. Fawcett, '15, is an instructor in animal husbandry at the New Hampshire College of Agriculture at Durham, N. H.

Donald R. Acklin, who graduated from Ohio State University in 1908, was recently appointed by Governor Frank B. Willis as one of the members of the state board of agriculture. Mr. Acklin has been engaged in the production of pure bred Hackneys and Shires at his home at Perrysburg, Ohio. He has fitted and shown at many of the live stock expositions, winning an unusual number of blue ribbons. His ability as a judge has been recognized, for his services in this line have been requested in various sections of the corn belt. He is secretary of the Wood County Live Stock Breeders' Association, an organization for the promotion of live stock interests in northern Ohio.

W. W. Ellenwood, '15, is at the Ohio Experiment Station, doing work toward his Master's degree in horticulture.

L. D. Campbell, '14, is with the farm management department of the Ohio Experiment Station at Wooster.

C. J. Windau, '14, is engaged in the retail fruit business at Port Clinton, Ohio.

Born, to Mr. and Mrs. J. W. Henceroth, of Oak Park, Ill., on June 22, a son, Stanley William. "Hency" was a

member of the class of '14 and is assistant agronomist for the Middle West Soil Improvement Committee of the National Fertilizer Association.

C. E. Dike, '15, is employed by the agronomy department of the Ohio Experiment Station at Wooster.

J. C. Heckler, '15, is with the John Wildi Condensery Co., at Ridgeway, Ohio.

R. C. Goldbach, '15, and G. W. Peters, '15, are with the John Wildi Condensery Co., at Marysville, Ohio.

George Little, '14, is coach of athletics at the University of Cincinnati. During the summer months he has charge of the school gardens for the city of Cincinnati.

S. C. Plank, '15, is teaching in the schools at West Liberty, Ohio.

Aden F. Huber, '15, was married to Miss Ola Souder of DeGraff, Ohio, on June 24. They will reside at Spring Valley Farm, DeGraff, Ohio.

Ivan Steiner, '09, is farming at Wooster, Ohio.

Clifton D. Lowe, '10, is a specialist in animal husbandry at the University of Tennessee, in co-operation with the U. S. Department of Agriculture. His address is Carriek Hall, Knoxville, Tenn.

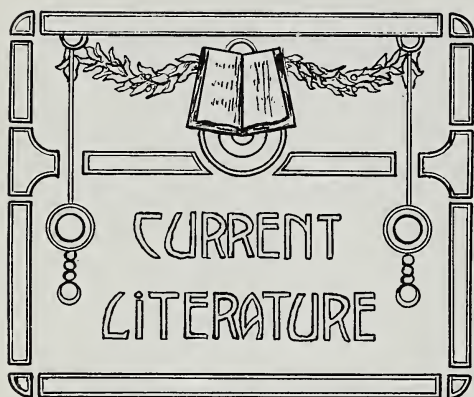
Paul McDorman, '08, is engaged in farming at Charleston, Ohio.

Carlton J. Koontz, '07, is engaged in farming at Lynchburg, Va.

George B. Crane, '13, was married to Ruth Siebert, '13, on May 29. Mr. Crane and his bride are at home at 79 Brighton Road, Clintonville. He is connected with the agricultural extension department.

C. N. Mooney, '00, had charge of the soil survey work in Miami and Hamilton Counties during the past summer.

Oliver Gossard, '15, is doing soil survey work in Geauga County.



Any of the following books may be obtained directly from the publishers or through The Agricultural Student. Special combination offers are given with this magazine.



“Chemistry in the Home” by Henry T. Weed is the title of a book which deals with the application of chemistry and its relation to every-day life. It aims to offer a fund of information concerning the chemistry of everyday things, related to industries and the home, and yet presenting the facts in a simple style of language suitable for boys and girls. Cooking, dyeing, laundering, food preservation and textiles are all treated from a chemical standpoint. 380 pages, \$1.20. American Book Company, Cincinnati.



“Poultry Diseases” by E. J. Wortley is a concise handbook for poultry rearers, which is valuable in determining the various diseases and the precautionary steps necessary in preventing the introduction and the spread of contagious diseases. It takes up control measures, the use of drugs and medicines, parasite diseases affecting the various organs of a fowl and shows how post-mortem examinations are made. 110 pages, 34 illustrations, \$1.00. Orange Judd Co., New York.

“How to Lay Out Suburban Home Grounds” by H. J. Kellaway deals with the best methods to pursue in designing small suburban grounds. It takes up the many features connected with the building of home grounds, including what to plant, how to make a lawn, grading and the treatment of difficult situations. 130 pages, \$1.25. John Wiley & Sons, New York.



“Agricultural Drafting” by Chas. B. Howe is a text-book for the use of students and teachers. The fundamental principles are presented as briefly and tersely as possible and problems are furnished on loose leaf sheets. The drawing exercises are real problems and require the student to exercise his own judgment and imagination in rendering. 46 pages, 45 figures, 22 plates \$1.25 net. John Wiley & Sons, New York.



“Farm Shop Work” by George M. Brace and D. D. Mayne provides a series of projects in woodworking, blacksmithing, cement and concrete work and harness mending. The exercises furnish valuable training in the practical arts and will result in the training of the student in the making of many things for the farm. 200 pages, \$1.00. American Book Company, Cincinnati.



“Elements of Forestry” by F. F. Moon and N. C. Brown is a careful consideration of the development and need of forestry in the United States. It takes up the tree, silvics, systems of management, artificial regeneration, forest protection, forest mensuration, lumbering, wood utilization, wood preservation and forest economics. 392 pages, \$2.00 net. John Wiley & Sons, New York.

“Engineering for Land Drainage” by C. J. Elliott is a new book which embodies the essentials of draining engineering in this country at the present time, with the latest development along each line, and is adapted to the use of the professional engineer and the student. It includes such topics as the development of land drainage, engineering technique, size and selection of drain tile, location and construction of open ditches, levy drainage systems, reclamation of tidal lands, drainage of irrigated lands, etc. 339 pages, 60 figures, \$1.80 net. John Wiley & Sons, New York.



“Practical Farm Drainage” by C. J. Elliott is a book which is valuable for the farmer and the student. It treats on artificial drainage, kinds of drains, work with the level, location of drains, construction of underdrains, cost of drainage, the draining of farm premises, road drainage and special problems in drainage. 179 pages, 46 figures, \$1.40. John Wiley & Sons, New York.



“Physics of Agriculture” by F. H. King is a book which is recognized by nearly all of the prominent agricultural teachers as one of the most complete books in its line. Fundamental principles are presented from the standpoint of physics rather than chemistry or biology, and in dealing with the physical side of agricultural problems the burden of the effort has been to lead the student to see why he should practice more than what.

The book has been written from the standpoint of the general farmer and student, rather than that of more technical scientific agriculture, and only so much of laboratory methods and specific data of observation are given as may serve to demonstrate the fundamental principles treated. 590 pages, 274 illustrations, \$1.75. Mrs. F. H. King, Madison, Wis.



“Studies of Trees” by J. J. Levison is an all-around book, adapted to the beginner, which gives, in a brief and not too technical way, the most important facts concerning the identification, structure and uses of our most common trees, and which considers their habits, enemies and care both when growing alone and when growing in groups or forests. It presents subject matter of value to students, private owners, farmers and teachers. 240 pages, 155 figures, \$1.60. John Wiley & Sons, New York.



“Rural Education” by A. E. Pickard is a book which is entirely different from all the other books which have been offered on the subject of rural education. It tells how the rural school can meet its obligation and opportunity by academic and industrial work. This book will prove invaluable in normal schools, teachers’ institutes, etc., for the personal use of teachers and reading circles. It treats on the teaching of manual training, horticulture and home economics and the relation of these subjects to the rural schools. 432 pages, illustrated, \$1.00 net. Webb Publishing Co., St. Paul.



SEPTEMBER NEWS NOTES

Over 150 persons have applied to enter the agricultural correspondence courses which will be offered for the first time about September 1. Twenty-two courses, ranging from four to seventeen lessons each, have been prepared by the heads of the departments in the college, and are now in printed form ready to send to the students who enroll in these courses. Alfalfa culture, concrete work, bee keeping, farm power, soil fertility, home economics, vegetable gardening and study of trees are some of the courses which will be offered.

It is believed that these course will be of special assistance to teachers who are required to teach agriculture, but who have never had opportunity to attend the college of agriculture. It is thought that the lessons may be studied in the grange meetings, community classes and in the rural Y. M. C. A.'s. All work of grading and correcting of manuscripts will be done by the extension department.

The last three bulletins published by the extension department, "The Judging of Horses," "The Judging of Dairy

Cattle," and "The Judging of Swine," have been the most popular of any three bulletins published, according to J. E. McClintock, supervisor of publications. The Farmer's Mail and Breeze of Topeka, Kansas, will publish a reprint covering eight issues on the judging of dairy cattle, which was prepared by Professor Gilbert Gusler, who coached the successful dairy team of last year.

The extension service has been divided into the following ten projects:

1. Administrative.
2. County agriculturists.
3. Special demonstrations.
4. Boys' club work.
5. Extension schools.
6. Home economics.
7. Cow testing associations.
8. Farm demonstrations.
9. Correspondence courses.
10. Fair exhibits.

Professor F. S. Jacoby has been elected secretary of the Ohio Poultry Breeders' Association. The organization expects to increase its membership from 700 to 3000 during the year.



PROF. PAUL L. VOGT.

Paul L. Vogt has been selected by the trustees of the University as professor of rural economics. Professor Vogt is a graduate of Butler College, Indianapolis, Ind., and of the University of Chicago. He has also taken post graduate work at Columbia University and the University of Pennsylvania. He received the degree of Doctor of Philosophy from the latter institution, his thesis being "The Sugar Refining Industry in the United States." Later he was special agent for the U. S. Bureau of Labor and Corporations, then professor of economics in Washington University. He resigned as professor of sociology at Miami University to accept the rural economics work at Ohio State University.

Professor Vogt is a native of Ohio and is familiar with the rural conditions in Ohio. He expects to develop his department so that it will be of the utmost service to the students in the college of agriculture and the farmers of Ohio.

EXTENSION NEWS.

Milligan Kilpatrick, a graduate of the Pennsylvania College of Agriculture, will be instructor in poultry for the extension department after October 1. He will give demonstrations of killing and caponizing at fairs, poultry shows and in some of the extension schools.

G. N. Daggar, a graduate of the University of Wisconsin, has been with the extension department since July 1. He has had charge of the farm management survey which was held in Miami County.

The survey consisted of the study of about 100 farms, to ascertain the factors which were influencing the incomes of the farmers in that county. It was found that in but few cases where yields were the greatest that the incomes were the highest. On the other hand, the incomes were higher where more attention was given to types of farming, the adaptation to types, the nearness to market and methods of co-operation.

Professor J. W. Falconer of the rural economics department was instrumental in starting and carrying out the survey.

Eight instructors have been coaching the boys in the county judging contests which will be held at county fairs this autumn. Forty-two contests will be held, with a total of over 3000 boys entered in the contests. Three boys from each county will be sent to the state contest, which will be held at Columbus during Farmers' Week in February.

Forty-seven extension schools have been granted for 1915-1916.

Melvin Ryder, '15, has been appointed assistant in publications in the extension department. He will devote one-half time to this work.

Misses Mary Graber and Hulda Horst will assist in the home economics extension work for the coming year.

AGRICULTURAL ENGINEERING.

"Farm Engineering" is the subject of a new text-book which Professor H. C. Ramsower, head of the agricultural engineering department, is preparing for the press at the present time. When issued the text will contain 550 pages and over 300 illustrations.

Francis L. Morrison, senior ag, has been appointed as student assistant in the farm engineering laboratory.

"Agricultural Drawing" is the subject of a new book which Professor F. W. Ives of the agricultural engineering department and Professor T. E. French of the engineering college have prepared during the summer. It contains 125 pages, 186 illustrations and will be used as a text by the students in the short course and the first year men of the four-year course.

Virgil Overholt, agricultural engineering demonstrator for the extension department, used over 500 feet of rope in demonstrating rope splicing, knot tying and rope hitches at the county fair held at Xenia, August 3-7.

G. W. McCuen, a graduate of the University of Illinois in both the engineering and agricultural colleges, will

have charge of the courses in farm power given by the department of agricultural engineering for the first time. Mr. McCuen has been in the employ of several of the large farm machinery manufacturers for three years, and just completed a course in agricultural engineering at the University of Illinois last year.

AGRONOMY NEWS.

"Studies of Soil" is the subject of an elementary manual for students of agriculture which Professor Arthur G. McCall of the agronomy department has recently prepared. It is designed especially for rural school teachers who are preparing to teach agriculture. It contains 85 pages and 32 illustrations.

E. C. Sleeth, a graduate of the University of Nebraska, will be instructor in the department of soils for the coming year.

P. C. Richard, a graduate of Kentucky Agricultural College, will be graduate assistant in the same department.

A. F. Head and C. W. Shiffler will be student assistants.

Soil surveys were made in Geauga, Miami and Hamilton Counties during the summer. C. N. Mooney, '00, had charge of the work. O. H. Smith, '15, Chester Baird, '16, and Oliver Gossard, '15, assisted in the survey.

"Buttermaking" is the subject of a text-book which Professor Oscar Erf has prepared during the summer. It contains over 100 pages and takes up all the phases relating to the manufacture of butter.



GEORGE W. BUSH.

George W. Bush, a graduate of Cornell University and formerly connected with the farm bureau work in New York State, has been appointed leader of the county agriculturists in Ohio. He will have headquarters in the extension department.

Mr. Bush's work as a county agent in Oneida County, New York, has been successful. While engaged in this work Mr. Bush gave special attention to the organization of buying and selling societies, dairy organizations, demonstration work, junior contest work and labor bureaus.

With the co-operation of the New York Central Railway lines, ground limestone was delivered to the farmers of Oneida County at the cost of \$2 per ton. Before from \$4 to \$6 was generally paid.

In the demonstration work, one orchard of 200 trees netted the owner \$1350 the first year, after thorough renovation by pruning and spraying. Other forms of demonstration work done directly on farms was the laying of drainage systems, spraying for potato blight, selection of seed corn and treating of seed oats for smut.

"We were influenced to begin to grow alfalfa through the stories of Joe Wing which appeared in the agricultural press," said Mr. Bush, in speaking of the success with alfalfa in Oneida County.

One of the most permanent features of work which Mr. Bush accomplished was the organization of a cow testing association, which, after two years of growth, had 2000 cows on tests.

Professor R. B. Stoltz of the dairy department, with Earl Jones, '12, of Maine, and O. A. Jamison, '12, visited, during the vacation months the agricultural colleges of Indiana, Illinois, Missouri, Iowa, Minnesota, Wisconsin and Michigan.

Ivan McKellip has been appointed by the dairy department to conduct the field work, cow testing organization work and dairy extension work. Mr. McKellip is a graduate of Purdue University and has spent several years in similar work for the U. S. Department of Agriculture.

H. A. D. Leggett, an instructor in the state agricultural school at Marlborough, Mass., has been secured to instruct the students in the winter courses of poultry. Mr. Leggett is a graduate of Cornell and has been judge at many of the poultry shows in New England.

S. M. Salisbury, '13, has been selected as instructor in animal husbandry to fill the vacancy made by the resignation of Professor Gilbert Gusler last spring. Mr. Salisbury has been instructor in animal husbandry at North Carolina College of Agriculture for two years.

HORTICULTURAL NEWS.

Prof. P. H. Ellwood, formerly of Amherst, Mass., will have charge of the courses in landscape gardening, given for the first time this year. Mr. Ellwood is a graduate of Cornell University and has had three years of practical work in landscape gardening and two years of instructional work in the Massachusetts Agricultural College.

William Hislop, a former instructor in the animal husbandry department at Ohio State, was married to Miss Elizabeth Kelton of Columbus on August 18. They will make their home in Pullman, Washington, where Mr. Hislop will continue his instructional work in the Washington Agricultural College.

N. R. Elliott, assistant in horticulture for the past two years, has accepted an assistant professorship in horticulture in the University of Kentucky, at Lexington, Ky.

A complete refrigeration plant, consisting of a 12-ton ammonia compressor and 20-horsepower motor has been installed in the basement of the new horticultural building. This outfit will be used in connection with the cold storage rooms. Fruits and vegetables will be kept in the cold storage for both commercial and instructional purposes.

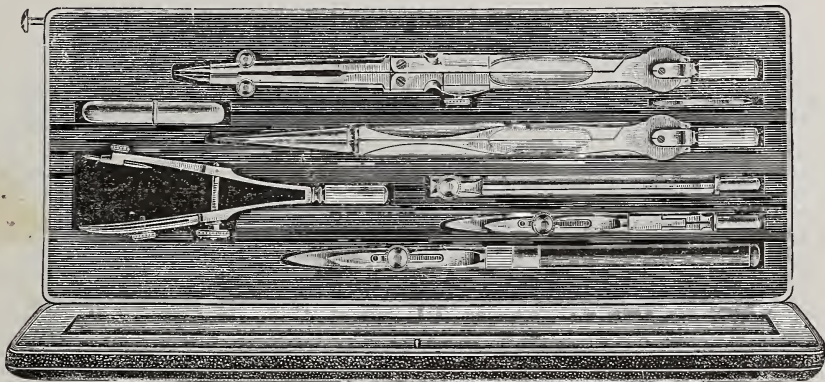
The manufacture of applebutter, cider, vinegar, catsup and pickles will be some of the features in the new course, by-products, given this year.

Mr. A. B. Taylor, of Cleveland, who is operating one of the largest companies doing landscape gardening work in the United States, will be non-resident professor of landscape gardening. His work will be of an advisory nature.

Danver Williams, a young man who has completed his college course at Wilmington College, even though he is totally deaf yet can carry on conversations by lip-reading, has expressed his intention of entering the college of agriculture when the first semester opens, September 21. Mr. Williams is regarded as one of the brightest students that was ever graduated from Wilmington College. He has taken an active part in college athletics, playing on the college basketball and baseball teams and quarterback on the football team. He specialized in botany and chemistry at Wilmington and expects to study agricultural chemistry at Ohio State.

Improvements made on the campus during the summer consist of the paving of the oval street from the High Street entrance to the Horticultural Building, the laying out and paving of a new street from Fourteenth Avenue to the Ohio Union Building and the laying out of a parking place for automobiles near the athletic field. Cluster lights have been installed on all portions of the campus where streets have been laid out. Excavations for the home economics building and for the new shops will probably begin early in the autumn.

Agricultural Drawing Instruments and Supplies



This is the Standard Set. Every item is guaranteed satisfactory to you.

You'll need either a Conklin or Waterman Fountain Pen. They are the most satisfactory.

Official Freshmen Caps and Gym Suits

Everything you need in Student Supplies, Souvenirs or Furnishings.

Maddox & Kilgore

High and Eleventh

Prof. W. J. Rader's

Private Academies of Dancing

Will organize classes as follows:



Dance Correctly

NEIL AVE. ACADEMY,
647 Neil Ave. Phones: Citizens 4431; Bell
Main 6189.

BEGINNERS' CLASSES WEDNESDAY evening, Sept. 22nd, and FRIDAY evening, Sept. 24th, 7:30 o'clock. First lesson.

SECOND TERM CLASS MONDAY evening, Sept. 20th.

OPENING RECEPTION THURSDAY evening, Sept. 23rd.

OAK STREET ACADEMY,
827 Oak Street.

A strictly private place for Sorority, Fraternity and Club Dances.

TUITION.

Gentlemen, per term of 10 lessons.....	\$5.00
Ladies, per term of 10 lessons.....	4.00
Private lessons, \$1.00; six for.....	5.00

Tuition can be paid \$1.00 per week until paid.

Private lessons can be had afternoon or evenings.

The Waltz, Two-Step and the late modern dances taught in one term.

NEIL AVE. PAVILION.

Located on Neil Ave., between Goodale St. and Poplar Ave.

Season Openings: Friday evening, September 24th, and Saturday evening, September 25th. Pavilion plan. Program will consist of Waltz, Two-Step and One-Step.

GOODMAN BROTHERS JEWELERS

No 98 NORTH HIGH ST

OUR SPECIAL

\$25 High St. Tailors \$25
For Young Men

Citizens 3796; Bell, Main 1590

166 North High Street



Get Out Your Work on a Typewriter

The student who uses a typewriter can preserve his notes in readable form—a great help in after years. As students of the Ohio State University, you should secure an L. C. Smith & Bros. typewriter now. After graduation you will need this machine for your correspondence and for your records. Write for a new booklet, “A Lesson in Operating.”

L. C. Smith & Bros. Typewriter Co.

87 NORTH THIRD ST., COLUMBUS, O.

HAVE THE BEST

Visit The Old Reliable

Baker Art Gallery
COLUMBUS, O.

State and High Streets

The largest, finest, and without doubt the finest equipped Gallery in America for producing everything known to the art.

SPECIAL O. S. U. RATES

The "Student" Laundry

Corner 11th Ave. and High

Special "Office" Rates

PROGRESS LAUNDRY

Dry and Steam Cleaning, Pressing

Our Tailoring Department is complete. 500 Patterns on which we can save you money.

MARZETTI

Restaurant

1548 NORTH HIGH ST.

We Bake Our Own Pies

STRICTLY HOME COOKING.

BLACKWOOD, GREEN & CO.

Hardware

Furnaces, Stoves and Kitchen

Furnishing Goods

Slate and Metal Roofing

AUTO REPAIRING

624 N. HIGH ST.,

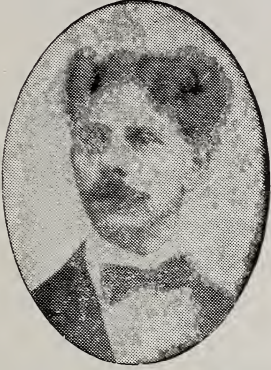
COLUMBUS, O.

College Book Store

Agricultural Books, New and Second Hand

The Euclid Academy of Dancing

HIGH ST. AND EUCLID AVE., ' Minutes' Walk from O. S. U.



Announcement

WE WISH TO MAKE THE FOLLOWING ANNOUNCEMENT FOR THE SEASON OF 1915-16:

Opening reception Thursday evening, September 30th, and every Thursday thereafter.

Beginner's Class

Will organize Beginners' Class Tuesday evening, September 28th, 7:30 o'clock. Tuition: Gentlemen, per term of 10 lessons, \$5.00; Ladies, per term of 10 lessons, \$4.00. Tuition can be paid \$1.00 per week until paid.

Business and Residence Phones: Auto 8584; Bell, N. 1759.



Private Lessons Can Be Had Any Hour, Morning, Afternoon or Evening

Private Lessons	\$1.00
Per Term of Six Lessons.....	5.00

WE GUARANTEE TO TEACH YOU TO DANCE IN ONE TERM OR PRIVATE OR CLASS LESSONS.

Academy can be secured for Private Parties, Fraternity Hops, Card Parties, Etc. No extra charge for card tables.

Prof. H. J. Guerr

ORR-KIEFER**Orr-Kiefer Studio Co.**

199-201 SOUTH HIGH STREET

Artistic Photography*"Just a little better than the best"***SPECIAL RATES TO STUDENTS****COLVMBVS, O.** *We Frame Pictures of all kinds—RIGHT*

HENNICK'S *The one place around the campus where you can get good things to eat and drink.*
...CONFECTIONERY...

NO BETTER CLOTHES THAN**MENDEL'S****—AT ANY PRICE—**

**SUITS MADE AND GUARANTEED
 TO FIT, FROM \$18 to \$40.**

MENDEL, The Tailor

545 NORTH HIGH STREET
 Few Doors South of Goodale St.

YOU'RE WELCOME AT**BROSMER'S****TWO STORES**

1591 N. HIGH ST., Opp. E. Eleventh Ave.
 Bell N. 1746, Citiz. 3596.

1735 N. FOURTH ST., Cor. Fourteenth Ave.
 Bell, North 3932.

Phone Orders Given Prompt Attention. We
 aim to please.

Home-made Baking, Ice Cream and Ices and
 Fine Candies.

MEET ME AT THE

Varsity Barber Shop
Cigar Stand and Pool Room

The Students' Rallying Place

1585 NORTH HIGH ST., Opp E. 11th Ave.
 Phone, North 59.

C. BLOOM**THE TAILOR****CLOTHES FROM \$18 UP**

Pants sponged and pressed..... 10c
 Suits sponged and pressed..... 40c
 Pants cleaned and pressed..... 40c
 Suits cleaned and pressed..... \$1.40

1986 NORTH HIGH STREET.

A Word to Freshmen

A well developed mind and a healthy body may be essential to success, but the average mind finds good clothes a mighty factor in "GETTING AHEAD."

The man who wears OUR made to measure clothes makes a good impression everywhere.

The superior quality and style of his garments give him an air of distinction and good bearing; his personality is properly expressed.

We'd like to take your measure for a new FALL SUIT.

The "So-Different" Tailory

C. H. BRADLEY, Prop.

Citizens Phone 5396

1541-1543 N. HIGH ST.



COLUMBUS, OHIO.

MONOGRAM—**THE Sheppard Ptg. & Pub. Co.**



79 East 11th. Ave., Columbus, O.
Citizens Phone 3755

Print Books, Papers, Programs, &c

GUARANTY—Skillful, Progressive Printing at Popular Prices

UNIFORM REMODELING

Second-Hand Uniforms for Sale

Japs, Service Stripes and Pants Stripes Made
While You Wait.

DRY CLEANING AND PRESSING...\$1.00
PRESSING 25c

SAM ROSEN, 1574 N. High

The McDonald Hardware Co.

FIFTH AVE. AND HIGH ST.

We are always pleased to do business
with O. S. U. boys.

Ohio Union Barber Shop

Stop in and Meet
BILL the Barber

VET. MED. '18

BASEMENT OF OHIO UNION

Bascom Brothers

Mfg. Jewelers

N. HIGH ST.

AT EAST ELEVENTH.



Makers of

STOCK JUDGING MEDALS
TOWNSHEND LITERARY PINS
THE POPULAR JEWELED "O"
ATHLETIC MEDALS
FRATERNAL and CLASS EMBLEMS



The Agricultural
Student and The
Breeder's Gazette
one year for

\$1.75



For one of his three yearly crops, the owner of this greenhouse grows tomato plants—selected, sturdy stock, and sells to the surrounding farmers.

Farm Inside As Well As Out

Do some intensive farming and get three times the number of crops you do in your extensive farming.

BUILD one of our greenhouses, one of our thoroughly practical kinds with no fuss and frills, simply a straightaway, thoroughly well-built, enduring glass enclosure for your garden. Then raise lettuce, tomatoes, cucumbers or strawberries. You will find no difficulty to market them and the price average will net you a nice, snug profit each year. Get a good man for your

foreman, then in the Winter keep on your regular Summer force in the greenhouse. By doing this, you can keep your good men all the year round, and go a long way toward solving your labor problem. Incidentally you will make money.

Let us go into all sides of the question with you. Send for our Commercial Greenhouse Catalog.

Lord & Burnham Co.

SALES OFFICES:

New York,
42nd St. Building.
Chicago,
Rookery Building.

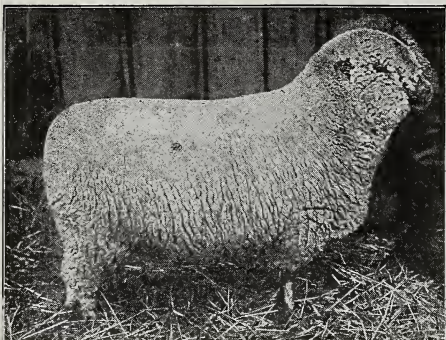
Boston,
Tremont Building.
Rochester,
Granite Building.
Toronto, 12 Queen St. East.

Philadelphia,
Franklin Bank Building.
Cleveland,
Sweetland Building.

FACTORIES:

Irvington, N. Y.

Des Plaines, Ill.



Shropshire Sheep

Bred by

W. F. Palmer & Son

PATASKALA, OHIO.

We have some extra good home bred yearling rams and ewes bred to Imported Tanner or Butter rams which we will offer at reasonable prices for fall delivery. Come and look over our flock, on Newark Traction line, near Wagram Stop.

DEWEY'S READY RATION

Guaranteed Analysis

25% Protein, 6% Fat, 10% Fibre

COMPOSITION:

Eagle	Distillers	Dried	Wheat Bran & Middlings
Grains			Pure Hominy Feed
Choice Cotton Seed Meal			Malt Sprouts
Linseed Oil Meal			$\frac{1}{2}\%$ Salt

Dewey's Ready Ration produces large milk flow. Dairy cows eat it greedily. Keeps them in good flesh—the pink of condition. Feed Dewey's Ready Ration and get

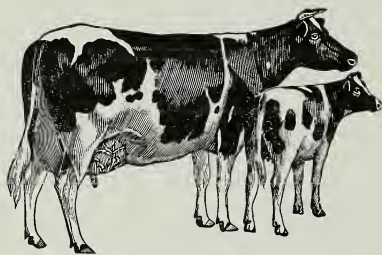
MORE MILK

better milk—at less cost. Feed it with home-grown hay, straw, fodder, ensilage, roots. Forms perfectly balanced ration. No other grain or feed necessary. Scientifically blended from highest grade feeds to produce most milk at smallest cost. Bulky and palatable. Easily digested and assimilated. Contains nutrients *that make milk.* Increases dairy profits. **ABSOLUTELY GUARANTEED.** Ask your dealer or write us for sample and information. Mention your dealer's name.

THE DEWEY BROS. CO.

Box 577

Blanchester, Ohio



Purebred Registered

HOLSTEIN CATTLE

If you have a herd, producing unprofitably, you can in a few years put it on the prosperity basis by introducing a pure-bred Registered Holstein sire of good individuality. Tests made at the Illinois State Experiment Station increased the average yearly production \$41.65 per cow in four years by the use of a pure-bred Holstein sire and by testing the individual cows and disposing of the low producers. Investigate the big "Black-and-Whites."

Send for FREE Illustrated Descriptive Booklets

THE HOLSTEIN-FRIESIAN ASSOCIATION OF AMERICA

F. L. Houghton, Secretary.

Box 154, Brattleboro, Vt.

MAPLECREST BREEDS THE BEST

OUR RECORDS PROVE IT

Name of Cow.	Length of Record, 365 Days.	Lbs. of Butter 80 % Fat.
Banostine Belle De Kol.....		1,322.92
High-Lawn Hartog De Kol.....		1,247.92
Maplecrest Pontiac Flora Hartog.....		1,232.63
Maplecrest Pontiac Spotted Annie.....		1,226.27
Daisy Grace De Kol.....		1,203.50
Maple Crest Pontiac Girl.....		1,109.41
Spotted Ann Daughter.....		1,088.75
Maplecrest Pontiac De Kol Lady.....		1,018.43

All of these great cows were bred, reared and developed at Maplecrest Farm

The Maplecrest Stock Farm Company

Telephone connection between Farms and Office

Office at Kalamazoo, Michigan.

Farms at East Claridon, O.

Choice Pure Bred Live Stock

is bred by the Animal Husbandry Department of the

Ohio State University

We breed Percherons, Clydesdales, Hackneys, Shorthorns, Jerseys, Holstein-Friesians, Guernseys, Shropshires, Merinos, Berkshires, Duroc-Jerseys, Large Yorkshires and some others. We often have surplus stock for sale at a reasonable price.

Address, DEPARTMENT OF ANIMAL HUSBANDRY,
Ohio State University, Columbus, Ohio.

Breeders and Stockmen, Attention!

We can supply your needs

*Pedigree Blanks, Sale Catalogs, Stationery
and Printed Supplies of all kinds*

Write us for prices on complete *Holstein-Freisian Pedigrees*, either printed or typewritten

THE INDIANOLA PRINTING CO.

1616 NORTH HIGH ST. COLUMBUS, OHIO

Men With Broad Vision

The men in the dairy business with broad vision clearly hold to the policy that a clean dairy is a paying investment.

Others, too, outside of the dairy business and yet closely related to it, also appreciate the importance of sanitation in the dairy. Just as men of broad vision proved the inadequacy of soap and soap powders for washing milk utensils, so other men of broad vision discovered and produced a material that is adequate for dairy cleaning. That material is



**Indian in Circle
in every package**

Wyandotte
Dairyman's
Cleaner and Cleanser

Wyandotte Dairyman's Cleaner and Cleanser lends itself to your consideration because it is just the kind of cleaner you naturally would expect men closely acquainted with the demands of modern sanitation to produce. It positively cleans clean, and it is harmless to milk. It has no soapy element, no organic grease of any kind. It makes no suds and therefore leaves neither soapy films of grease nor soapy odors. Nor has it any other objectionable property. As you will readily discover, Wyandotte Dairyman's Cleaner and Cleanser is more than merely a cleaner—it also sweetens and purifies, imparting a freshness and wholesomeness that is a delight to every progressive dairyman.

Ask your dealer or order from your regular supply house.

The J. B. Ford Co., Sole Mfrs., Wyandotte, Mich.

This Cleaner has been awarded the highest prize wherever exhibited.

Welcome to the Wyandotte Booth, Panama-Pacific International Exposition, Agricultural Building, Block 6, Cor. Ave. A and Third St.



"I See Bill Erected Another Natco"

—Same old story. Bigger profits, more stock, an additional silo. And why is the second silo always a Natco, too? The reasons why are best appreciated by owners of other silos not built for good, whose walls are not air, moisture and frost-proof, resulting in much spoiled ensilage. The Natco stands year in and year out just as the day it was erected, yielding sweet, succulent silage in all parts, through all

conditions of weather. Better benefit by the experience of others and erect the silo that's windproof, decayproof, fire-proof and verminproof—the

NATCO EVERLASTING SILO

"The Silo That Lasts For Generations"

It's built of hollow vitrified clay tile which will endure forever, and whose glazed surfaces absorb no moisture and totally exclude air and frost. It's reinforced by bands of steel laid in the mortar, and can resist all wind and silage pressures; thus a taller silo with a smaller diameter can be erected for there is no danger of a blowdown. Plan for your new silo now. Send today for a list of Natco owners in Ohio and ask for Catalog 46

National Fire Proofing Company Established 1889 **Canton, Ohio.**

The silo is the most important business building on the farm. Build carefully for permanency.

The "SIMPLEX" Link Blade Cream Separator

Improved Design



LIGHTEST RUNNING.

LARGEST CAPACITIES.

CLOSEST SKIMMING.

The Only Practical Large Capacity Separator

500 lbs. \$75.00 900 lbs. \$ 90.00

700 lbs. 80.00 1100 lbs. 100.00

D. H. BURRELL & CO.

LITTLE FALLS, N. Y.

Manufacturers of Creamery, Cheese Factory
and Dairy Apparatus and Supplies.

Also, B-L-K COW MILKING MACHINES.

Caught 51 Rats One Week

Trap resets itself; 22 inches high. Will last for years. Can't get out of order. Weighs 7 pounds. Twelve rats caught one day. Cheese is used, doing away with poisons. This trap does its work, never fails and is always ready for the next rat. When rats and mice pass device they die. Rats are disease carriers, also cause fires. Rat Catcher sent prepaid on receipt of \$3. Mouse Catcher, 10 inches high, \$1. Money back is not satisfied. **H. D. SWARTS**, Inventor and Manufacturer, Universal Rat and Mouse Traps, Box 566, Scranton, Pa.

BUY FROM THE MANUFACTURERS

HIGH GRADE

Veterinary Surgical Instruments

Each, Postpaid

2 oz. N. P. Dose Syringe..... \$1.10
Per half doz., \$4.50; doz..... 8.00
Dehorner, \$6.50 to 14.00
Impregnators, \$3.50 to..... 6.00
Capon Sets, \$1.50 to..... 3.50

Write for Illustrated Catalogue and
Special Cash Prices.

HAUSSMANN & DUNN CO.

TEXT BOOKS AND SUPPLIES

708 S. CLARK ST.

CHICAGO.

Cottonseed Meal

DIXIE BRAND

(Standard)

Tagged 38.62 to 43% Protein.

BULL BRAND

(Selected)

Tagged 41 to 43% Protein.

FORFAT BRAND

(Average)

Tagged 38.62 to 41% Protein.

Humphreys Godwin Co.

Memphis, Tenn.

You Can Grow Alfalfa On YOUR Farm



Alfalfa
Inoculated with
"Nitragin"



Alfalfa
Not
Inoculated



PURE CULTURE
THE SIMPLEST SAFEST AND SUREST SYSTEM
OF SOIL INOCULATION FOR ALL LEGUMES



Gold Medal, St. Louis,
1904

Change failure to success. Make sure of a "catch," a good stand and a big yield. Save money, seed, time and labor. Grow the **wonder-crop**—the best feed, the biggest money-maker; at the same time, enrich your soil.

Inoculate Alfalfa, Clover and Other Legumes with

"NITRAGIN" Pure Culture is packed in a **granular medium (not a jelly)** in ventilated tin cans, containing millions of surfaces supporting billions of nitrogen-gathering germs.

Remember, legumes without nitrogen-gathering germs take **no** nitrogen from the air.

Don't bother with bottled jelly cultures. That form of package was years ago discarded as impracticable by the makers of "NITRAGIN."

Get the **original** Pure Culture—"NITRAGIN"—in the bronze-colored can, with the Armour oval label. The health, strength and vitality of the germs are

Guaranteed for Six Months by The Armour Fertilizer Works

The guarantee is plainly printed on every can. "NITRAGIN" Pure Culture germs are absolutely **harmless**. Easy to use. An investment—not an expense.

See your seed dealer or write our nearest office for free booklet.



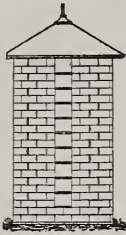
In half-acre, 1-acre
and 5-acre cans

Armour Fertilizer Works

Union Stock Yards, Chicago, Ills.
1015 Hartman Bldg., Columbus, Ohio

Dr. Lipman, of New Jersey Experiment Station, tried "Nitragin" Pure Culture. In Bulletin No. 226 he says: "Alfalfa Yield Increase due to 'Nitragin' Pure Culture was 500%."

LIKE THE "ROCK OF GIBRALTAR"



—"without a crack anywhere and keeping the ensilage perfectly, right up to the edge all around"—this is the statement of Mr. W. R. Spann, of Shelbyville's famous "Burr Oak" Farms, while speaking of his

Perfect Reinforced Cement Silos

Storms, wind and weather cannot destroy "Perfect" Silos. Made of everlasting cement blocks, reinforced with wire and steel rods. Absolutely fireproof. Guaranteed not to crack. Write for illustrated, descriptive booklet giving the opinions of leading farmers and dairymen.

REPRESENTATIVES WANTED. Write for terms and free booklet.

The PERFECT REINFORCED CEMENT SILO & CISTERN CO.
DELAWARE, OHIO.

General Sales Agents, Hocking Valley Ensilage Cutters.

Creamery Machinery—Ice Cream Equipment

Simplex Link Blade Cream Separators, Minnetonka Home Creamery Churns, James Stalls and Stanchions, James Littl Carriers. Universal Ripener and Pasteurizer, Simplex, Chilly King, Champion Coolers, B-L-K Milkers, Rice & Adams Fillers

ONLY THE BEST MANUFACTURERS REPRESENTED—THE "OHIO" LINE OF SUPPLIES IS COMPLETE.

Let us Supply You Today. Write for Catalog.

THE OHIO CREAMERY & DAIRY SUPPLY CO.
DAIRY BUILDERS AND ENGINEERS

124-126 THIRD ST. WEST.

CINCINNATI, OHIO

One Barrel of "Scalecide"
Will Spray as many Trees as Three Barrels of Lime Sulfur

"Scalecide" has greater invigorating effect on your orchard—kills more scale, eggs and larvae of insects with half the labor to apply. We can back up this statement with facts concerning the *Good Results from Using*

"SCALECIDE"

Send for our illustrated booklet—"Proof of The Pudding". Tells how "Scalecide" will positively destroy San Jose and Cottony Maple Scale, Pear Psylla, Leaf Roller, etc., without injury to the trees. Write today for this **FREE** book and also our booklet—"Spraying Simplified". Learn the dollars and cents value of "Scalecide, The Tree Saver".

Our Service Department can furnish everything you need for the orchard at prices which save you money. Tell us your needs.

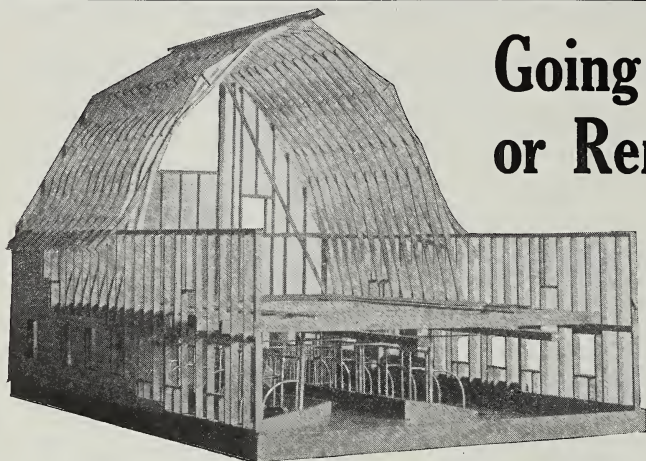
B. G. PRATT CO., Mfg Chemists Dept. 15 50 Church St., New York

THE FEED THAT FATTENS

High Grade Cottonseed Meal

Get our prices before you buy

The WM. A. BURNETT CO., 207 Exchange Bldg. Louisville, Ky.
Established 1901



Going to Build or Remodel?

**Let LOUDEN
BARN PLANS
Save You Time
and Money**

THE SERVICE WE OFFER YOU

The Louden Architectural Department is composed of skilled draftsmen and architects who for years have been exclusively engaged in the study of barn architecture. That's why they are better fitted than even the most skilled general practicing architects to give you expert advice and assistance on barn construction problems. They can help you get a better barn at a minimum cost, and one that will exactly meet your needs.

We make no charge for preliminary plans and suggestions, or for advisory service. For complete working plans and specifications a nominal charge is made to cover actual cost of production.

Write today for further information about Louden Barn Plan Service.

OUR BOOK OF BARN PLANS.

LOUDEN BARN PLANS contains the most valuable collection of practical barn plans ever assembled in book form. It treats thoroughly every phase of modern barn construction; drainage, concrete work, strength of materials, roof construction, lighting, ventilation, etc., etc. The publisher's price of LOUDEN BARN PLANS is \$1.00. It's free to you if you expect to build or remodel.

Don't Fail to Get This Valuable Book. It's Stored with Practical, Money-Saving Information Every Barn Builder Needs.

Fill out the coupon or mail us a postal today.

LOUDEN SANITARY BARN EQUIPMENT.

If you expect to build or remodel you will be interested in Louden barn equipment, the largest and most complete line of modern, sanitary, time and labor-saving barn furniture made.

We can equip your barn from basement to ridgepole. Check the catalogs you are interested in, and mail the coupon today; you might forget it tomorrow.

LOUDEN MACHINERY CO.,

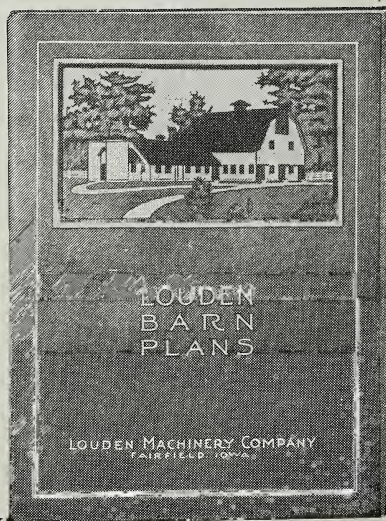
5200 Broadway, Fairfield, Iowa.

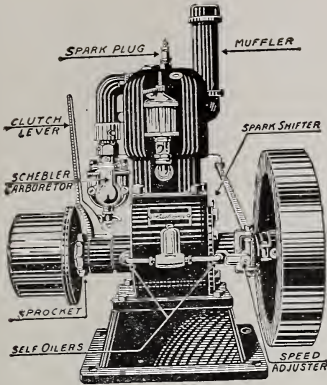
Gentlemen: Please send me, free of charge, a copy of your book. LOUDEN BARN PLANS. I expect to build a barn.....ft. long x.....ft. wide. I will keep.....cows,horses. Please send me also the following catalogs:.....feed and litter carriers,stalls and stanchionsbarn door hangers,hay tools.

Name

Town.....

R. F. D..... State.....





Cushman ^{LIGHT WEIGHT} Engines FOR ALL FARM WORK

Notice the many special features not found on ordinary engines. Advanced type, very light weight—4 H. P. only 190 lbs.; 8 H. P. only 320 lbs.



Cushman 4-Cycle Gasoline Engines are very quiet and steady, because of Throttle Governor and Perfect Balance. They are not cheap engines, but are cheap in the long run, as they are the most useful farm engine in America.

Ask us for free catalogue showing many jobs Cushman Engines can do that no other engine can do, also about engine drive on binders.



Cushman Motor Works 926 N. 21st Street
LINCOLN, NEB.

ZENOLEUM

A Remedy for All Live Stock
A standardized coal-tar disinfectant, lice-killer, animal dip.
Always the Same
Destroys disease germs, cures skin troubles. Used and endorsed by

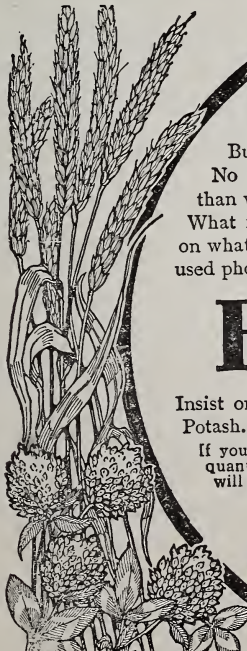
50 Agricultural Colleges
Our guarantee is liberal and positive: "If Zenoleum is not all we say it is or what YOU think it ought to be, you can have your money back."
Use Zenoleum: Get more milk; more pork; more wool and mutton; more eggs; more work done; more profit.
Prices, postpaid: 5 oz. 50c; qt. 50c; gal. \$1.50. Ask for our 1915 Free Live Stock Insurance Policy.
Zenner Disinfectant Co.,
Lafayette Ave.
Detroit, Mich.
USE ZENOLEUM LICE POW.
FOR FUR FOLLY

+++++

*Has your subscription
to The Agricultural
Student expired?
Renew it At Once!*

+++++



Wheat and Clover

Many farmers stick to wheat raising mainly because clover follows it in the rotation.

But why not get the best possible out of both crops?

No crop returns better profit for the right fertilizer than wheat.

What is the right fertilizer? That depends on the soil and on what fertilizer you have used on it. The longer you have used phosphate the sooner it will pay you to balance it with

POTASH

Insist on your wheat fertilizer containing 6 to 8 per cent. of Potash. **Potash Pays** on both wheat and clover.

If your dealer does not carry Potash, write us for prices, naming quantity needed, and ask for our free book, "Fall Fertilizers." It will show you how to save money and increase profits.

German Kali Works, Inc.
42 Broadway, New York

McCormick Block, Chicago Bank & Trust Bldg., Savannah
Whitney Central Bank Bldg., New Orleans
25 California St., San Francisco
Empire Bldg., Atlanta



Why Suffer Losses from Hog Cholera?

For prevention, use "544."

If your herd has been exposed, is infected and sick with cholera, treat them with "544."

"554" is a chemical substance—not a serum or virus—and is administered hypodermically.

No dangers of producing abscesses—of new centers of infection—of abortion—of stopping growth or development.

Read the letter below, written in answer to one of inquiry from Messrs. Alex. McClure & Son, of Braddyville, Iowa, to S. D. Crites, a banker-farmer, of Elida, Ohio. Messrs. McClure & Sons are raisers and breeders of pure bred Duroc swine in a large way.

Sarasota, Florida, March 4th, 1915.

Alex. McClure & Sons:

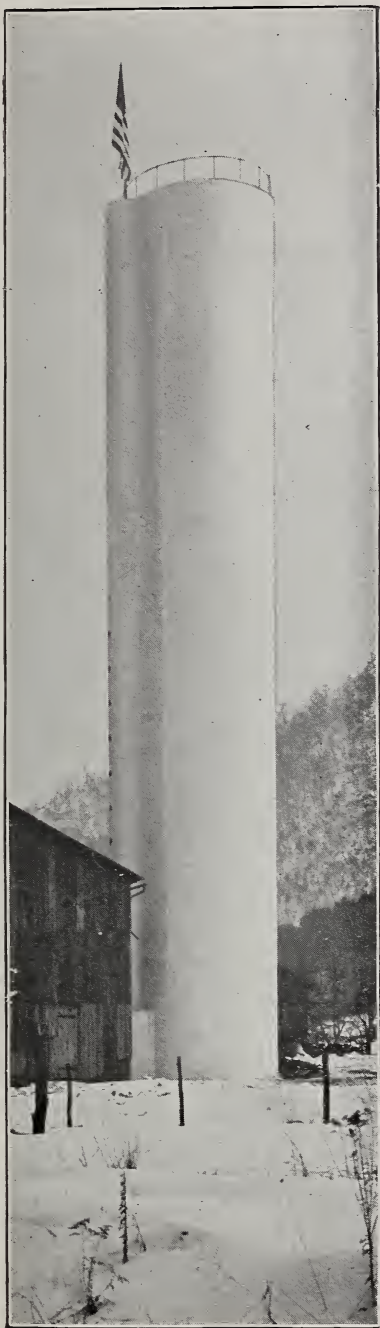
Dear Sirs: Your favor of the 21st ultimo did not reach me until this day, hence the delay. We have suffered much from hog cholera, and have tried all of the heard of remedies. I beg to answer you that so far as my experience goes "544" is the best preventive and cure that I know of. I say cure in a conservative way, for I do not claim it will cure all when the fever has risen to the danger point. I have not lost a hog since 1913. "544" is used more extensively in my locality than any other remedy. I think in my experience, but one hog developed an abscess and that was around the hind leg and was not serious.

S. D. CRITES, Allen County, Ohio.

If interested, or further information is desired, write for free booklet to

The Thiele Laboratories Co.

407 HARTMAN BUILDING,
COLUMBUS, OHIO.



A 108' Polk System Silo

"They are not built of pieces
and the cannot go to pieces,"

GET SILO-WISE

The silo does away with a ruinous waste in the corn-field—a tossing away of one-half the nutriment. It doubles the efficiency of an acre of corn ground. It keeps the cattle healthy and makes them sell for more. It is indispensable in dairying. It does away with risk in cattle raising—*Makes It a Business Instead of a Bet.* The silo stands for a new era in American agriculture.

Polk System Silos are considerably the best monolithic concrete silos possible. They are perfect in design and construction and they last forever—despite wind, fire, lightning, and time.

We have some excellent pictures of *Polk System Silos* that you ought to see. Just send a request for our catalog. *Do It Today.*

Polk, Genung, Polk Company

FORT BRANCH, INDIANA

GRAND PRIZE
PANAMA - PACIFIC EXPOSITION

Awarded to

DE LAVAL
CREAM
SEPARATORS

as the Highest Award has been
at every International Exposition
since the invention of the Cen-
trifugal Cream Separator in 1878.

And likewise as at all previous
expositions, all the higher dairy
product awards at San Francisco
have been made to users of the
De Laval machines.

The DE LAVAL SEPARATOR CO.
165 Broadway, New York 29 E. Madison St., Chicago

50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER